

U.S. Department of Interior
Bureau of Land Management

ROSEBURG DISTRICT

ANNUAL PROGRAM SUMMARY

AND

MONITORING REPORT

FISCAL YEAR 1998

ROSEBURG DISTRICT

ANNUAL PROGRAM SUMMARY

FISCAL YEAR 1998

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ANNUAL PROGRAM SUMMARY

Executive Summary

This document combines the Roseburg District Annual Program Summary and Monitoring Report for fiscal year 1998. These reports are a requirement of the Roseburg District Record of Decision and Resource Management Plan. The Annual Program Summary addresses the accomplishments of the Roseburg District in such areas as watershed analysis, Jobs-in-the-Woods, forestry, recreation, fire, and other programs. It also provides information concerning the Roseburg District budget, timber receipt collections, and payments to Douglas County. The results of the 1998 Annual Program Summary show that the Roseburg District is fully and successfully implementing the Northwest Forest Plan.

The Monitoring Report compiles the results and findings of implementation monitoring for fiscal year 1998, the third full fiscal year of implementation of the Roseburg District Resource Management Plan (RMP). The Monitoring Report, which is basically a “stand alone” document with a separate executive summary follows the Annual Program Summary in this document.

Although the Annual Program Summary gives only a very basic and very brief description of the programs, resources and activities in which the Roseburg District is involved, the report does give the reader a sense of the enormous scope, complexity and diversity involved in management of the Roseburg District public lands and resources. Although there are and will continue to be challenges which will require us to adapt and to give our best, the managers and employees of Roseburg District take pride in the accomplishments described in this report.

Third Year Evaluation

In addition to fiscal year 1998, additional summary information is provided in this document for the first three years (1996, 1997 and 1998) of implementation of the Roseburg District Resource Management Plan. The summary information for 1996, 1997 and 1998 will be used in a formal evaluation of the Resource Management Plan.

The Roseburg District Record of Decision and Resource Management Plan require these formal evaluations at the end of every third year after implementation begins. The purpose of the evaluation is to determine whether there is a significant cause for an amendment or revision of the plan. The focus of the evaluation will be on whether the RMP goals and objectives are being met, whether the goals and objectives were realistic and achievable, and whether changed circumstances or new information have altered expected impacts as described in the RMP/FEIS.

Simultaneously with other western Oregon BLM districts, Roseburg has initiated the collection of supplemental information and analyses required for evaluating the RMP. The evaluation will be based on implementation actions and plan and project monitoring from June 1995 through September 1998. BLM staff have already taken actions to determine if there has been any significant change in the related plans of other federal agencies, state or local governments, or Native American Indian tribes, or

whether there are other new data of significance to the plan.

All supplemental analyses and RMP evaluations are expected to be completed by the summer of 1999, when they will be made available for public review prior to approval by the BLM Oregon/Washington State Director. The State Director's findings will indicate whether or not the western Oregon RMPs are individually or collectively still valid for continued management direction or require plan amendments or revisions, together with appropriate environmental analyses and public participation.

Table 1 - Roseburg RMP, Summary of Renewable Resource Management Actions, Directions and Accomplishments

RMP RESOURCE ALLOCATION OR MANAGEMENT PRACTICE OR ACTIVITY	FISCAL YEAR 1998 ACCOMPLISHMENTS	CUMULATIVE ACCOMPLISHMENTS		PROJECTED DECADAL PRACTICES
		1995-1998 Timber	1996-1998 Others	
Regeneration harvest (acres sold)	802	2,996		11,900
Commercial thinning/density management (acres sold)	592 - 427	2,053 - 604		840 - 1,660
Site preparation (acres)	149	1,247		8,400
Vegetation control, fire (acres)	0	0		-
Prescribed burning (hazard reduction acres)	0	0		-
Prescribed burning (wildlife habitat and forage reduction acres)	0	0		-
Natural or artificial ignition prescribed fire for ecosystem enhancement (acres)	0	0		-
Plantation Maintenance / Animal damage control (acres)	1,350	5,099		8,300
Pre-commercial thinning (acres)	4,305	11,837		39,000
Brush field/hardwood conversion (acres)	0	0		150
Planting/ regular stock (acres)	1,183	2,645		2,900
Planting/ genetically selected (acres)	157	798		11,400
Fertilization (acres)	1060	5,338		11,400
Pruning (acres)	957	2,146		4,600
New permanent road const. (miles/acres*)	5.7	18.9		65
Roads fully decommissioned/ obliterated (miles*)	33.1	61.0		-
Roads closed/ gated (miles**)	11.8	12.3		-
Open road density (per square mile*)	4.59	4.59		-
Timber sale quantity sold (m board feet)	44,545	142,321		495,000
Timber sale quantity sold (mm cubic feet)	7.356	23.556		70
Noxious weed control, chemical (acres)	45	53		-
Noxious weed control, other (acres)	625	772		-

* Bureau managed lands only: ** Roads closed to the general public, but retained for administrative or legal access

Table 2 - Roseburg RMP, Summary of Non-Biological Resource or Land Use Management Actions, Directions and Accomplishments

<u>RMP RESOURCE ALLOCATION OR MANAGEMENT PRACTICE</u>	<u>ACTIVITY UNITS</u>	<u>FISCAL YEAR 1998 ACCOMPLISHMENTS</u>	<u>CUMULATIVE ACCOMPLISHMENTS 1995-1998</u>
Realty, land sales	(actions/acres)	0	0
Realty, land exchanges	(actions/acres acquired/disposed)	0	0
Realty, R&PP leases/patents	(actions/acres)	0	0
Realty, road rights-of-way acquired for public/agency use	(actions/miles)	0	0
Realty, road rights-of-way, permits or leases granted	(actions/miles)	10	33
Realty, utility rights-of-way granted (linear/areal)	(actions/miles/acres)	3	5
Realty, withdrawals completed	(actions/acres)	0	0
Realty, withdrawals revoked	(actions/acres)	0	0
Mineral/energy, total oil and gas leases	(actions/acres)	0	0
Mineral/energy, total other leases	(actions/acres)	0	0
Mining plans approved	(actions/acres)	0	1
Mining claims patented	(actions/acres)	0	0
Mineral material sites opened	(actions/acres)	0	0
Mineral material sites, closed	(actions/acres)	0	0
Recreation, maintained off highway vehicle trails	(units/miles)	0	0
Recreation, maintained hiking trails	(units/miles)	8/14	24/42
Recreation, maintained sites	(units/acres)	14/405	42/1,215
Cultural resource inventories	(sites/acres)	28/407	36/2302
Cultural/historic sites nominated	(sites/acres)	0	0
Hazardous material sites	(identified/cleaned)	3 / 2	10/9

Introduction

This Annual and Third Year Program Summary is a review of the programs on the Roseburg District Bureau of Land Management for the period of June 1995 through September 1998. The program summary is designed to report to the public, local, state and federal agencies a broad overview of activities and accomplishments for Fiscal Year 1996, 1997 and 1998. This report addresses the accomplishments of the Roseburg District in such areas as watershed analysis, Jobs-in-the-Woods, forestry, recreation, and other programs. It also provides information concerning the Roseburg District budget, timber receipt collections, and payments to Douglas County. Included in the Annual Program Summary is the Monitoring Report for the Roseburg District.

Implementation of the Northwest Forest Plan began in April 1994 with the signing of the Northwest Forest Plan Record of Decision. Subsequently, the Roseburg District began implementation of the Resource Management Plan (RMP), which incorporates all aspects of the Northwest Forest Plan, in June 1995 with the signing of the RMP Record of Decision. Fiscal Year 1996 through 1998 represent the first three years of implementation of the Resource Management Plan.

There are 20 land use allocations and resource programs under the Roseburg District Resource Management Plan. Not all land use allocations and resource programs are discussed individually in a detailed manner in this Annual Program Summary because of the overlap of programs and projects. A detailed background of various land use allocations or resource programs is not given in this Annual Program Summary in order to keep this document relatively concise. Additional information can be found in the Resource Management Plan Record of Decision and supporting Environmental Impact Statement. These documents are available at the Roseburg District office.

The manner of reporting the activities differs among the various programs. Some resource programs lend themselves well to a statistical summary of activities while others are best summarized in short narratives. Further details concerning individual programs on the Roseburg District may be obtained by contacting the Roseburg District office.

Budget

In fiscal year 1998, Roseburg District had a total appropriation of \$12,487,000. This included \$1,200,000 for the Jobs-in-the-Woods program; \$232,000 Management of Lands and Resources (MLR); \$112,000 fire; \$10,906,000 Oregon & California Railroad Lands (O&C); \$67,000 mining law.

In fiscal year 1998, there were 161 full-time employees, and a total of 57 temporary, term or co-operative student employees. The number of temporary, term and co-operative student employees on board varied throughout the year with a total of 57 employed at some time during the year.

Total appropriations for the Roseburg District have been relatively stable during the period 1996, 1997 and 1998, with an approximate average appropriation of \$12,670,000.

The number of full time employees has also been stable during this three year period, with an average of 160 full time employees.

Timber Sale Pipeline Restoration Funds

Twenty-five percent of these funds are dedicated to recreation backlog projects on O&C Districts of Western Oregon. The funds are intended to reduce infrastructure replacement or facility maintenance needs and resolve critical visitor safety or recreation management needs or issues identified in land use plans. Recreation site resource protection needs can also be met. During the first year of implementation in FY 1998, the Roseburg District obligated \$218,500 of recreation pipeline funds to the following projects:

- ! Paving and renovation of Tyee Recreation Site. Placement of host shelter.
- ! Replacement of restroom at Cavitt Creek Campground.
- ! Replacement of dilapidated picnic tables at several recreation sites.
- ! Cultural inventory and evaluation at Susan Cr. Day-use Area and Cavitt Creek campground, preparatory to major recreation site renovations. .
- ! Pavilion construction at Rock Creek Recreation Site.
- ! Fence replacement at Eagleview Day-use Area
- ! Gravel parking at North Bank Ranch west entrance.

Planning was also performed to prepare for an additional \$705,000 worth of projects in FY-1999 involving seven recreation sites and a variety of renovation projects.

Recreation Fee Demonstration Project

In March 1998, the Roseburg District received approval for establishing its Recreation Pilot Fee Demonstration Project under the authority of Public Law 104-134, Section 315. This authority allows the retention and expenditure of recreation fees for operations and maintenance of recreation sites where the fees were collected. A special account was established for the District, in which fees for camping and pavilion use at Susan Creek, Mill Pond, Rock Creek, Cavitt Creek, and Tyee Recreation Sites, and special recreation permits would be deposited.

At the end of FY 1998, a total of \$55,485 was deposited. Receipts included \$52,860 from campground and pavilion fees, and \$2,625 from one Special Recreation Permit. The only expenditure was for the paving contract at Tyee Recreation Site for \$4,265. This low amount was due to the late start of the program in the year and because the year's work had already been funded prior to receipt of the monies. The remainder was carried over into FY 1999 and has been targeted for a variety of recreation maintenance / enhancement projects.

Land Use Allocations

There have been no changes in land use allocations since the completion of the Record of Decision due to land tenure adjustments (land exchanges, land sales, and boundary adjustments). An adjustment of 11 acres was made to riparian reserves in the Upper Umpqua fifth field watershed. This adjustment

was the result of a reduction of the riparian reserve width on intermittent streams in the Four Gates timber sale.

Aquatic Conservation Strategy Implementation

Riparian Reserves

Silvicultural practices have been implemented within riparian reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain aquatic conservation strategy objectives. These silvicultural practices include tree planting, precommercial thinning, and density management. Some salvage in accordance with the RMP has taken place in riparian reserves.

Density management has occurred on 501 acres, and salvage has occurred on 24 acres within riparian reserves.

Watershed Analyses

Watershed analysis is required by the Northwest Forest Plan (NFP) Record of Decision (ROD). The primary purpose is to provide decision makers with information about the natural resources and human uses in an area. This information will be utilized in National Environmental Policy Act (NEPA) documentation for specific projects and to facilitate compliance with the Endangered Species Act (ESA) and Clean Water Act (CWA) by providing additional information for consultation with other agencies.

Watershed analyses include:

- ! Analysis of at-risk fish species and stocks, their presence, habitat conditions and restoration needs;
- ! Descriptions of the landscape over time, including the impacts of humans, their role in shaping the landscape, and the effects of fire;
- ! The distribution and abundance of species and populations throughout the watershed;
- ! Characterization of the geologic and hydrologic conditions.

This information was obtained from a variety of sources, including field inventory and observation, history books, agency records and old maps and survey records.

Table 3. - Watershed Analysis Status

	<u>Watershed Analysis Areas</u>	<u>Number of key watersheds</u>	<u>BLM Acres</u>	<u>Percent of total acres</u>
Completed through FY98	25	11	346,673	82%
Ongoing FY99	3	0	57,151	95%
Remaining FY2000+	2	0	21,176	5%

Total	30	11	425,000	100%
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Survey and monitoring work included: surveyed 90 miles of stream for proper functioning condition, operated 49 temperature monitoring stations, 6 gauging stations, collected sediment samples, one United States Geological Survey site on the North Umpqua Wild & Scenic River for continuous water quality.

As of the end of fiscal year 1998, twenty-five watershed analyses had been completed through at least the first iteration. These watershed analyses included Old Fairview (Middle North Umpqua), Calapooya Divide (Calapooya), Tom Folley (Elk Creek, near Drain), Hubbard Creek (Upper Umpqua), Upper South Myrtle (Myrtle Creek), Days Creek (South Umpqua), St. John Creek (South Umpqua), Coffee Creek (South Umpqua), Middle Umpqua Frontal (Upper Umpqua), Upper Smith River, Brush Creek/Hayhurst (Elk Creek, near Drain), Canton Creek, Rock Creek, Little River Adaptive Management Area, Stouts Creek (South Umpqua), Poole Creek (South Umpqua), Shively-O'Shea (South Umpqua), East Elk Creek (Elk Creek, near Drain), Umpqua Frontal (Upper Umpqua), Radar/Wolf (Upper Umpqua), North Bank Ranch, Deadman Creek, Cow Creek, Olalla-Lookingglass, and Elkton-Umpqua. These watershed analyses involved a total of 999,007 acres, including 346,673 acres of public land administered by the BLM. This watershed analysis effort has encompassed 82% of the Roseburg District by the end of fiscal year 1998.

Watershed analysis ongoing or proposed in FY 99 or beyond include - Calapooya, Canyonville/Canyon Creek, Kent-Creek, Deer Creek, Middle North Umpqua.

Watershed Restoration Projects

Road Restoration / Obliteration - The aspect of watershed restoration work which consists of decommissioning roads is an ongoing process. During any given fiscal year the status of road decommissioning consists of some of the decommissioning work being completed, and some of the decommissioning work under contract to be completed. As of fiscal year 1998, approximately 61.0 miles of road have been completed or are under contract to be fully decommissioned. The decommissioning of roads is dependent on complex and sensitive negotiations with permittees who have legal rights on most Roseburg District roads through Road Use Agreements. In fiscal year 1998, the district has continued to work towards building understanding and trust concerning the objectives of road decommissioning with permittees that is expected to facilitate this process in future years. Road renovation and upgrading is another aspect of watershed restoration. Road renovation may include surfacing, replacing or adding culverts, improving drainage, seeding and mulching and other activities that effect water quality and aquatic habitat. The wide variety in types and intensity of road renovation limit the meaningfulness of a single total of miles accomplished. Road renovation for watershed restoration purposes is accomplished under timber sale contracts and Jobs-in-the-woods.

Riparian Habitat Enhancement - Additional watershed work included 490 acres of brushed conifer reestablishment and density management in riparian areas, seven environmental assessments in areas that plan to improve riparian vegetation, two monitoring studies for timber fertilization and a monitoring plan for timber fertilization in the Little River Adaptive Management Area, five monitoring studies for sediment, water temperature, water chemistry, Cooperative water quality and stream flow monitoring, and two hydro mulching projects to reduce sediment yield.

Late-Successional Reserves and Assessments

Late-Successional Reserve Assessments have been completed and reviewed by the Regional Ecosystem Office for late-successional reserves RO 151, 222, 251, 257, 259, 260, 261, 263, 254, 265, 266 and 268. All large LSRs on the Roseburg District are now covered by a completed and REO reviewed LSR assessment with the exception of RO 223. The LSR assessment for RO 223 is expected to be completed and reviewed by REO during fiscal year 1999. Many of the LSR assessments were joint efforts involving the US Forest Service and other BLM districts.

During fiscal year 1998, there were 386 acres of density management and 4 acres of salvage that occurred in late-successional reserves. During the period of 1996 through 1998, there were 499 acres of density management that took place in late-successional reserves. Other activities that occurred in LSRs include planting, precommercial thinning and fertilization. All of these activities were accomplished under either initial LSR assessments completed prior to fiscal year 1997 or subsequent LSR assessments which met applicable standards and guidelines.

Little River Adaptive Management Area

Little River Adaptive Management Area is one of ten AMAs designated under the Northwest Forest Plan for ecosystem management innovation including community collaboration and management applications. The management emphasis of Little River AMA as set forth in the Northwest Forest Plan is the development and testing of approaches to the integration of intensive timber production with restoration and maintenance of high quality riparian habitat. Working with other agencies, organizations, and the public are other areas of learning.

In January 1997, the Roseburg District BLM and the Umpqua National Forest released a draft of the Little River Adaptive Management Area (AMA) Plan. A requirement of the Northwest Forest Plan, the AMA document frames a direction for adaptive management on the Federally managed experimental area. It reflects diverse input received from interested citizens, organizations, and agencies. Both Roseburg BLM and the Umpqua National Forest are currently managing the Little River AMA under the draft AMA plan and in accordance with the Northwest Forest Plan.

The E-Mile timber sale specifically addressed the emphasis for the AMA. The challenge was to harvest timber yet maintain a high quality riparian condition. Unstable slopes were excluded from the sale area where landslide risk was high and 50% crown closure was left on moderate risk areas. Other objectives include stand health improvement, accelerating the development of late-successional conditions in the Riparian Reserve, and upgrading 2.5 miles of road. The impacts of the road upgrades to the stream network will be evaluated and point source erosion will be monitored over time.

One outstanding example of interagency cooperation is the Wolfpine Timber Sale which was sold without protest. The project will develop and test methods of thinning around remaining live sugar pine trees and use of prescribed fire to restore and maintain populations. A Memorandum of Understanding was signed by the BLM, the FS, PNW, Wolf Creek Job Corp, and the Southwest Oregon Insect and Disease Technical Center for the combined timber sale and research project. The Umpqua National

Forest will administer the contract.

Water quality monitoring continues to be a major emphasis for the Little River AMA. The monitoring program is an interagency effort that includes temperature stations, multi-parameter grab sample measurement by volunteers and the Glide School students, and continuous monitoring. A gauging station is proposed that would provide continuous telemetered flow measurements and other data to phone or internet. Related to water quality monitoring is outmigrant smolt monitoring that has so far amassed three years worth of data on Little River. All water quality data will be linked to an interagency geographic information system.

Other projects already developed or still under development include coarse woody debris, landslide, and road inventories and research that investigates the endangered mariposa lily, sugar pine restoration, and fertilization effects on water quality. More information about projects in Little River can be obtained on the AMA web site, www.teleport.com/~lrama.

Matrix - Retention of Late Successional forest patches - 15% Analysis

The NFP/ROD and ROD/RMP require that BLM and USFS provide for the retention of late successional / old growth fragments in the matrix where little remains. The standards and guidelines are to be applied to any fifth field watershed in which federal forest lands are currently comprised of 15 percent or less late-successional forest (LSF), considering all land allocations. All Roseburg District FY 95-98 sales sold under the Roseburg District Resource Management Plan have complied with the 15 percent rule per the initial analysis.

At the time of the initial implementation of the Roseburg District RMP, the district completed an initial screening of watersheds. The initial analysis applies to all actions with decisions prior to October 1, 1999.

A joint BLM / FS Instruction Memorandum was issued on September 14, 1998. This provided additional guidance for implementing the 15% S&G throughout the area covered by the Northwest Forest Plan. Implementation of this guidance is required for all actions with decisions beginning October 1, 1999. A revised 15% analysis is currently in progress, but overall results will not be available for publication in the FY98 Annual Program Summary. They will be published concurrent with completion of the Roseburg District third year evaluation of the RMP in fiscal year 1999.

Air Quality

Special care is taken to ensure that all prescribed fire projects are done in compliance with the Oregon Smoke Management Plan. There were no intrusions of smoke into any designated area. The prescribed program on the Roseburg District has adapted to the ecosystem management under the RMP. Air quality considerations in prescribed burn plans include burning when good smoke mixing and dispersal exists, and prompt mop-up of burned units to reduce residual smoke.

Fire/Fuels Management

June to September 1995

Prescribed Fire: 332 acres
On district wildfires: 9 fires for a total of 1.95 acres - all lightning caused
Off district wildfires: 13 district personnel accepted assignments to 12 fires.

Fiscal Year 1996

Prescribed Fire: 304 acres
On district wildfires: 21 fires for a total of 15.17 acres - 17 were caused by lightning, 4 were human caused
Off district wildfires: 57 district personnel accepted assignments to 35 fires.

Fiscal Year 1997

Prescribed Fire: 872 acres
On district wildfires: 4 fires for a total of 1.61 acres; all were human caused.
Off district wildfires: No district personnel were assigned to any off district fires in 1997.
One employee was detailed to the Redmond Hot Shots during 1997.

Fiscal Year 1998

Prescribed Fire: 161 acres
On district wildfires: 21 fires for a total of 13.27 acres - 19 were lightning caused and 2 were human caused
Off district wildfires: 28 district personnel accepted assignments to 27 wildfires

Total, June 1995-September 1998

Prescribed Fire: 1669 acres
On district wildfires: 54 fires for a total of 32 acres - 44 were lightning caused and 10 were human caused
Off district wildfires: 98 district personnel accepted assignments to 74 wildfires from Oregon to Florida.

Water and Soils

Fiscal year 1998 Summary

Water temperature was monitored at 65 streams on the Roseburg District. These data will be used in watershed analysis, water quality management plans, and will be provided to DEQ for basin assessment.

A water quality study was completed in cooperation with the US Geological Survey on trace elements in the South River resource area of the district. The results will be presented in a report in fiscal year 1999 at no further cost to the district. These data will be used as baseline data for watershed analysis, water quality management plans, and for abandoned mine inventory.

Methods taught at Rosgen training courses were used by BLM personnel to survey 10 stream gaging sites in the ongoing effort to develop regional curves of channel geomorphology used for improved accuracy of flow predictions, better design of instream structures, improve our ability to assess changes in peak flow as a result of management activities, monitor changes over time, and classify streams.

Turbidity and sediment data were collected and analyzed through the cooperative study with the Umpqua National Forest.

Stream water quality was monitored and will be published in the North Umpqua River Wild and Scenic Section through the cooperative study (an ongoing annual effort) with Douglas County Water Resources Survey.

Stream flow was monitored at selected sites through the cooperative study (an ongoing annual effort) with the Douglas County Water Resources Survey.

The update of the hydrology/fish layer data base has been completed for 2 ½ fifth field watersheds, a difficult process that is ahead of schedule.

Summary Information for Fiscal Year 1996-1998

The Roseburg District surveyed 128 miles of streams for proper functioning condition; operated 47, 49, and 65 temperature monitoring stations in 1996, 1997 and 1998 respectively; operated 6 gauging stations; five studies for sediment, water temperature, water chemistry; cooperatively monitored water quality on the North Umpqua Wild and Scenic River; completed a cooperative study with the USGS; two monitoring studies for timber fertilization; a monitoring plan for timber fertilization in the Little River Adaptive Management Area; over 501 acres of brushed conifer reestablishment; 500 acres of density management in riparian reserves to attain aquatic conservation strategy objectives; and numerous hydromulching projects to reduce sediment.

State-listed Clean Water Act 303d streams

The Roseburg District has 24 state-listed streams identified by the Department of Environmental Quality (DEQ).

Table 4. 303(d) Listed Waterbodies in the Roseburg District

<u>Stream or Waterbody Name</u>	<u>Basin/Sub Basin</u>	<u>Criteria for listing</u>	<u>Resource Area</u>
Canton Creek	Umpqua/North Umpqua	Habitat Modification, Sediment, Temperature- Summer	Swiftwater
Cavitt Creek	Umpqua/North Umpqua	Habitat Modification, Sediment, Temperature-Summer	Swiftwater
Jim Creek	Umpqua/North Umpqua	Temperature-Summer	Swiftwater
Little River	Umpqua/North Umpqua	Habitat Modification, pH-Summer, Sediment, Temperature-Summer	Swiftwater
North Umpqua River	Umpqua/North Umpqua	Flow Modification, Temperature-Summer	Swiftwater
Northeast Fork Rock Creek	Umpqua/North Umpqua	Temperature-Summer	Swiftwater
Rock Creek	Umpqua/North Umpqua	Temperature-Summer	Swiftwater
Scaredman Creek	Umpqua/North Umpqua	Temperature-Summer	Swiftwater
Wolf Creek	Umpqua/North Umpqua	pH-Summer, Temperature-Summer	Swiftwater
Cow Creek	Umpqua/South Umpqua	pH-Summer, Temperature-Summer	South River
Deadman Creek	Umpqua/South Umpqua	Temperature-Summer	South River
East Fork Stouts Creek	Umpqua/South Umpqua	Temperature-Summer	South River
Middle Creek	Umpqua/South Umpqua	Temperature-Summer	South River
Olalla Creek	Umpqua/South Umpqua	Temperature-Summer	South River
South Fork Middle Creek	Umpqua/South Umpqua	Temperature Summer	South River
South Myrtle Creek	Umpqua/South Umpqua	Flow Modification, Temperature-Summer	South River
South Umpqua River	Umpqua/South Umpqua	Biological Criteria, Dissolved Oxygen-Cool Water Aquatic Life: May to October, Periphyton-Summer, pH-Summer, Sediment, Temperature-Summer, Water Contact Recreation (Fecal Coliform)-Fall through Spring, Water Contact Recreation (Fecal Coliform)-Summer	South River
West Fork Stouts Creek	Umpqua/South Umpqua	Temperature-Summer	South River

Calapooya Creek	Umpqua/Umpqua	Dissolved Oxygen-Salmonid Spawning: September through March, Flow Modification, pH-Summer, Temperature- Summer, Water Contact Recreation (Fecal Coliform)-Fall through Spring, Water Contact Recreation (Fecal Coliform)-Summer	Swiftwater
Elk Creek	Umpqua/Umpqua	Dissolved Oxygen-Salmonid Spawning: September through March, Flow Modification, Temperature-Summer Water Contact Recreation (Fecal Coliform) -Fall through Spring, Water Contact Recreation (Fecal Coliform)-Summer	Swiftwater
North Fork Smith River	Umpqua/Umpqua	Temperature-Summer	Swiftwater
Smith River	Umpqua/Umpqua	Temperature-Summer	Swiftwater
Umpqua River	Umpqua/Umpqua	Flow Modification, Temperature- Summer, Water Contact Recreation (Fecal Coliform)- Fall through Spring	Swiftwater
Wolf Creek	Umpqua/Umpqua	Temperature Summer	Swiftwater

Municipal Watersheds

There are 26 community water systems with BLM-administered lands within the Roseburg District. The district has entered into memorandums of understanding with the cities of Drain, Riddle, and Canyonville. The objectives of these agreements is to maintain the best water quality through Best Management Practices. A Special Land Use Permit has been issued to the City of Myrtle Creek for watershed protection which includes the city intake and the adjoining 190 acres. There have been no reports of contamination or water quality violations from BLM-administered lands.

Updated Stream Information

The update of the HYD/Fish layer data base has been completed for 2-1/2 fifth field watersheds, a difficult process that is ahead of schedule.

RMP Modified site treatments

Forest management activities involving ground based systems are designed to have insignificant (less than one percent) growth loss effect. The use of prescribed fire on highly sensitive soils (Category I- those soils recognized as unusually erodible, nutrient deficient, or low organic matter) is avoided. If prescribed burning on such soils is considered essential for resource management, it is accomplished under site specific prescriptions to minimize adverse impacts on soil properties.

RMP Best Management Practices

Best Management Practices are identified and required by the Clean Water Act as amended by the Water Quality Act of 1987. Best Management Practices are defined as methods, measures, or practices to protect water quality or soil properties. Best Management Practices are selected during the NEPA interdisciplinary process on a site specific basis to meet overall ecosystem management goals. The Roseburg District Record of Decision and Resource Management Plan lists Best Management Practices for various projects or activities that may be considered during the design of a project. Monitoring of the RMP during 1996-1998 has shown that Best Management Practices have been appropriately implemented with a high degree of success. Although effectiveness monitoring for the RMP has not yet taken place to a significant extent, the Best Management Practices set forth in the RMP are well-tried and widely used practices with a history of effectiveness.

Wildlife Habitat

Green tree retention

The RMP management direction is to retain six to eight green conifers trees per acre in the General Forest Management Area and 12 to 18 green conifer trees per acre in the Connectivity/Diversity Blocks. The retained trees are to be distributed in variable patterns to contribute to stand diversity. The implementation of this management direction has been complex due to the many variables involved including ecological objectives and operational feasibility. Monitoring has shown no instances in which this RMP management direction was not implemented successfully.

Snag and snag recruitment

Approximately two snags per acre are being left on each regeneration harvest unit. As many existing snags as possible that are not safety hazards are attempted to be retained. In areas where adequate number of snags are not present or are not retained due to operational limitations, additional green trees are being reserved during project design and layout. The implementation of this management direction, similar to green tree retention, has been complex due to the many variables involved including ecological objectives and operational feasibility. Monitoring has shown no instances in which this RMP management direction was not implemented successfully.

Coarse woody debris retention and recruitment

RMP management direction is to leave 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 inches long. Where this management direction cannot be met with existing coarse woody debris, merchantable material is used to make up the deficit. Monitoring has shown no instances in which this RMP management direction was not implemented successfully.

Connectivity/Diversity Blocks

There has been 326 acres of regeneration harvest, 705 acres of commercial thinning, and 100 acres of salvage in connectivity/diversity blocks during fiscal years 1996-1998. Twenty-five percent of connectivity/diversity blocks is maintained in late-successional forest at any point in time.

Nest Sites, Activity Centers and Rookeries

Golden Eagle

Six golden eagle nest sites are known to occur on the district. No regular monitoring of these nest sites is conducted. It is not known how many of the sites have been active during the evaluation period. Since 1995, no timber sales or other projects were initiated which would have disturbed active golden eagle nest sites.

Osprey

During the period of this evaluation two osprey nesting platforms were constructed as mitigation for potential disturbance to an osprey nest site during construction of the Osprey Boat Ramp.

Elk Habitat

No road closures have been implemented to date specifically for elk management. Rights-of-way agreements in the matrix lands restrict the district's ability to close roads. Elk management activities to date have focused on preparing a cooperative agreement with the Oregon Department of Fish and Wildlife to seed newly burned sites to species beneficial to elk. No such seeding has occurred during the evaluation period.

Late-Successional Reserve habitat improvement

Density management in stands younger than 80 years old has been accomplished on 499 acres during fiscal year 1996-1998. The objective of this density management is to hasten the acquisition of old growth characteristics such as canopy gaps, layering of under story vegetation, creation of large trees, snags and coarse woody debris.

Special Status Species/Habitat

Survey and Manage/Protection Buffer Species

Mollusks

The Roseburg District contains habitat for three species of mollusks listed in Appendix H of the RMP: *Megomphix hemphilli*, *Prophysaon coeruleum*, and *Prophysaon dubium*. Surveys for these species began in 1997 and are continuing in the district. To date more than 1,000 acres have been

surveyed for these species. At the end of the summer in 1997, over 300 sample plots had been surveyed and approximately 50 sites containing one or more of these species were located. As of August, 1998, a total of 367 sites had been documented. Two timber sales and one commercial thinning have had S&M mollusk buffers applied. A total of approximately 17 acres (16 acres in the two sales, 1 acre in the thinning) were affected.

Red Tree Vole

Public lands within the Roseburg District do not meet the habitat thresholds needed to require red tree vole surveys. Incidental observations recorded during spotted owl monitoring activities in the South River RA have recorded 28 potential sites since 1996.

Del Norte Salamander

Potential habitat areas were mapped in 1996. Contract inventories conducted in 1997 surveyed 71 potential sites. Del norte salamander were documented on 6 of the sites. Two sites were surveyed in 1998 as part of project planning. No salamanders were documented. To date, no sales or other projects have required modification due to the presence of this species.

Threatened/Endangered Species

Throughout the period of this evaluation the Roseburg District has complied with the requirements of the Endangered Species Act. Consultation under Section 7 of the ESA occurs on all activities proposed within habitat of listed species. An interagency Level 1 Review Team of biologists from the BLM, USFWS, and NMFS is involved early to assist in the analysis and, if needed, modification of project plans and Biological Assessments.

A large portion of the District wildlife program's resources are directed toward gathering and interpreting information to ensure compliance with the ESA and the land use plan.

Northern Spotted Owl

The Roseburg District currently contains 192,990 acres of suitable owl habitat. An additional 215,426 acres are considered "Habitat - Capable". A total of 110,665 acres are considered Critical Habitat suitable for nesting, roosting, or foraging. One hundred acre retention core areas of best northern spotted owl habitat were established around all spotted owl activity centers that were known as of January 1, 1994. A total of 142 core areas covering 134,421 acres were established. As of 1998, a total of 271 spotted owl activity centers had been located on Federal lands in the Roseburg District.

Annual monitoring is conducted to determine owl nesting activity on the District. Detailed information is gathered on spotted owl sites on Federal land as well as some sites on private land adjacent to Federal land. Beginning in 1997, monitoring efforts were reduced in the Swiftwater Resource Area. Monitoring continued in the South River Resource Area with much of the information much of the information used to assist the Pacific Northwest Research Station's efforts to monitor two long term demographic study areas.

Results of these efforts were as follows:

<u>Survey Year</u>	<u>Sites Surveyed¹</u>	<u>No. Pairs Observed²</u>	<u>Proportion of Sites Occupied</u>
1996	328	149	45%
1997	301	123	41%
1998	302	132	44%

¹ Sites which had one or more visits. May include some sites which did not receive 4 visits.

² Includes only pairs. Does not include single birds or 2 bird pairs of unknown status.

Columbian White-tailed Deer

The Roseburg District acquired the former Dunning Ranch through a land exchange in 1994. This area contains 6,581 acres of Columbian white-tailed deer habitat. The area was designated the North Bank Habitat Management Area/ACEC. A habitat management plan and environmental assessment was completed by an interagency team consisting of personnel from BLM, USFWS, and ODFW in February 1998. The plan and EA were appealed by Umpqua Watersheds, Inc. in March 1998. The District has begun preparation of an EIS to address issues raised by the appeal.

Marbled Murrelet

Surveys have been conducted for marbled murrelet on the Roseburg District since 1992. Of the 189,499 acres of public land within the zones 1 and 2 of potential habitat for the murrelet, 83,285 acres have been classified as suitable habitat. Surveys conducted over the last 6 years (including inventories of areas designated as highest potential sites, as well as clearance surveys for timber sales) located three occupied sites. Only one nest has been located. Of the three occupied sites, two are located in Late Successional Reserves. The one site located on matrix lands was buffered by reserving 133 acres of habitat around the site. Surveys following approved protocol are conducted on all potential sale units within suitable habitat. In 1998, a total of 2,016 acres of habitat were surveyed with no new occupied sites confirmed.

Bald Eagle

Seven bald eagle nest sites are located on public land in the district. Six of the sites have management plans. Seasonal restrictions and distance buffers are applied to proposed activities in the vicinity of bald eagle nest sites. No winter roosts or concentration sites have been located on public land in the district.

Peregrine Falcon

Peregrine falcon inventory efforts began in 1996. Potential peregrine falcon habitat on the district was

been mapped and habitats evaluated for their potential to support nest sites. Intensive field surveys were conducted in high potential habitat in an attempt to document nesting activity. By the end of the 1998 field season, three confirmed nest sites and one probable site had been located. One site is on public land. The others are on private land adjacent to public land. During the evaluation period there were no proposed projects within buffer zones around the sites.

Other Species of Concern

This category includes other species which have received special tracking emphasis on the district.

Townsend's Big-eared Bat

The Pacific Townsend's big-eared bat is a former Federal Candidate species. It remains listed as a candidate species by the state of Oregon, is on list 2 of the Oregon Natural Heritage Program, and is listed as a BLM sensitive species for Oregon. In 1995, the Roseburg District issued a contract to Southern Oregon State College to characterize forest roost sites of bats of special concern. Field work was conducted in the Little River AMA. No roost sites of Townsend's big-eared bat were located. No roost sites or hibernacula have been located for this species on public land. If such sites are located they will receive special restrictions as described in the RMP. The Scott Mountain hibernaculum, mentioned in the RMP, has not been acquired by the BLM. The private lands on which it was located have been cut over and bat use has been greatly reduced.

Northern Goshawk

The northern goshawk is a former candidate species. It is a Bureau sensitive species, a state of Oregon candidate species and an ONHP List 3 species. Northern goshawk surveys are conducted as a part of the timber sale planning process. More than 5,000 acres of potential habitat have been surveyed since 1996. Four nest sites were located. Only one was located in a proposed sale unit (Unit E, Little China timber sale). The unit (total of 34 acres) was dropped from the sale due to several concerns including the presence of the nest and location of an S&M mollusk buffer area in the same unit..

Great Gray Owl

The Great Gray Owl is not a Bureau sensitive species, but is a species which is tracked to obtain more information as to its status. Most of the Roseburg District is below the elevation (3,000 ft.) specified in the great grey owl survey protocol. Great grey owls have been occasionally observed on the district. Although 2,977 acres have been surveyed for this species during the last 3 years, no nests have been located.

Fish Habitat

There was a continued increase in District effort during fiscal year 1998 to address fisheries issues related to Threatened and Endangered anadromous salmonids. The District increased its fisheries staff by two permanent, full-time Fishery Biologists. Fisheries staff for the district now consists of five permanent, full-time Fishery Biologists, two full-time (Term) Fishery Biologists, and two temporary

Biological Technicians. Major duties are divided between inventory, assessment, restoration, Watershed Analysis, NEPA documentation, timber sale review, and Section 7 ESA (Endangered Species Act) consultation with the NMFS (National Marine Fisheries Service).

Fisheries Inventory and Assessment

Smolt Trapping

The District operated six rotary screw smolt traps to assess the numbers of juvenile anadromous salmonids migrating to the ocean (smolts) from the subject watersheds (Table 1). This project was in support of the Oregon Plan for Salmon and Watersheds (Oregon Plan) and will help fisheries and land managers compare smolt production between watersheds, assess the affects of watershed management on fish survival, and determine priorities for watershed restoration activities.

Traps were operated during the primary period of smolt outmigration (generally March - July) or until stream flows dropped and prevented efficient operation of the traps. A variety of fish species were captured including chinook salmon, coho salmon, steelhead trout and cutthroat trout. In all, over 45,000 fish were captured during the 1998 season. While definitive conclusions cannot be reached after only one year of data, continued smolt trapping will provide better insight into the dynamics of anadromous fish populations within the Umpqua basin.

Table 5. Summary of FY 1998 Smolt Trapping Information

Location	Basin Area (Acres)	Coho Smolts	Chinook Smolts	Steelhead Smolts	Cutthroat Smolts
		Total Captured	Total Captured	Total Captured	Total Captured
Calapooya Creek	157,300	2,077	2,492	254	23
Canton Creek	40,573	0	3	44	1
Little River	131,853	14	1,014	114	2
Lookingglass Cr.	103,109	1,637	4,727	85	17
Myrtle Creek	76,036	512	1,685	22	3
Rock Creek	62,684	915	4,071	71	2

Fish Distribution Surveys

Fisheries personnel reviewed approximately 35 stream miles to determine the presence or absence of fish within potential timber harvest units and as part of Watershed Analysis. Information was used to accurately establish Riparian Reserve boundaries within proposed project areas and to update fish distribution for the District hydrology/fish GIS theme.

Spawning Surveys

The District conducted coho salmon spawning surveys in support of the Oregon Plan. Personnel surveyed 61 stream reaches on a weekly basis. A total of 269 stream miles were reviewed during the survey period. Surveyors observed 177 coho salmon and 165 coho salmon redds (nests). Information was coordinated with the Oregon Department of Fish and Wildlife to help estimate numbers of coho salmon returning to watersheds within the Umpqua basin.

Aquatic Habitat Restoration

Fish Passage Restoration

The District continued to identify and replace culverts that have historically been barriers and/or impediments to salmon and trout migration. In FY98 the District replaced 9 culverts and removed 2 culverts to facilitate upstream fish migration. Culverts were located in the South Fork Smith River, Little South Fork Smith River, Yellow Creek (Smith River), North Fork Big Tom Folley Creek, North Umpqua (North Bank Ranch tributary), and Willingham Creek drainages. This resulted in restoring passage to approximately 4 miles of stream and improving passage to approximately 10 miles of stream for spawning and rearing fish.

Roads/ Sediment Reduction

Road related activities to improve watershed health and fish habitat continued to receive focus from the District. In FY '98 the District fully decommissioned¹ approximately 6.0 miles of road. This is expected to dramatically reduce the maintenance needs for these roads and prevent future road failures that could damage fish habitat. In addition, approximately 5.8 miles of road were decommissioned², and approximately 31.0 miles of road were improved³ to help reduce the risk of aquatic habitat degradation from road related sources. Road work was focused in the South Fork Smith River, North Fork Big Tom Folley Creek, Saddle Butte Creek, Skunk Creek, Fate Creek, Curtain Creek, Olalla Creek, and Willingham Creek drainages. Due to current lawsuits a portion of the road related restoration was not fully implemented in FY '98. The numbers reported reflect work that was either completed or under contract in FY '98.

Fisheries and Aquatic Education

District fisheries personnel continued to educate local school students on fisheries and watershed

¹Roads that were determined to have no future need and were sub-soiled or tilled, seeded, mulched, and planted to reestablish vegetation. Cross drains, fills in stream channels, and potentially unstable fill areas were removed where appropriate to restore natural hydrologic flow. Roads were closed with an earthen barrier or similar equivalent.

²Roads closed to vehicles on a long-term basis, but may be used again in the future. Prior to closure the roads were prepared to avoid future maintenance needs; which included where appropriate establishing cross drains, and removing fills in stream channels and potentially unstable fill areas. Exposed soils were treated to reduce sedimentation. Roads were closed with an earthen barrier or similar equivalent.

³Roads where extra drainage structures were added and/or surfaced in order to raise the road to current RMP standards, effectively reduce sedimentation, and increase infiltration of intercepted flows.

related issues. Two fifth grade classes from Melrose School were taken to Rock Creek where they learned important aspects of fish, fish habitat, and aquatic insects. A fish physiology lab was taught at Glide High School, and students from Phoenix school were taken to the field to observe spawning coho salmon. Several field trips were conducted to show students how smolt traps operate and techniques for fish handling, identification and enumeration. In addition, presentations were made at BLM recreation sites to educate campers on fisheries related issues in the Umpqua basin.

ESA Section 7 Consultation

Due to the April 1998 court ruling on the PCFFA (Pacific Coast Federation of Fisherman's Associations) vs the NMFS (National Marine Fisheries Service) lawsuit, two BO's (Biological Opinions) covering 23 District timber sales were invalidated. The District completed three new BA's (Biological Assessments) covering the 23 timber sales. These new BA's addressed the concerns raised in the court ruling. So far, the district has received two biological opinions, while a third is still pending based on these biological assessments.

Special Status and SEIS Special Attention Species

Surveys for special status and special attention species are being conducted prior to ground disturbing activities. Over 18,000 acres have been surveyed for these species during fiscal years 1996-1998, including 12,000 acres in reserve land use allocations. See Tables 6, 7, and 8.

Survey and Manage Species and Protection Buffer Species:

There are approximately 400 species listed in the Northwest Forest Plan and Roseburg RMP as either survey and manage or protection buffer species. Each survey and manage species or protection buffer species has management requirements. Management requirements include one or more of four survey and manage strategy or the requirements for managing the sites. Much of the information to carry out the various strategies has been under development through the Regional Ecosystem Office with the help of species experts from throughout the northwest.

Survey protocols have now been developed for amphibians, mollusks, fungi, lichens and bryophytes. Surveys for most of these species began in 1998. Management recommendations for strategy 1 of survey and manage have currently been developed for bryophytes, fungi, and amphibians. Many of the staff involved with survey and manage or protection buffer species have been trained in implementing survey protocols and identification.

Table 6. Total Number of Sites by Taxa Group for Special Status Plant Species (09/30/98)

Taxa Group (#species)	Federal Listed	Federal Candidate	Bureau Sensitive	Assessment Species	Tracking Species
Fungi (0)	0	0	0	0	0
Lichens (1)	0	0	0	0	1
Bryophytes (2)	0	0		2	0
Vascular Plants (28)	0	6	46	10	130

Table 7. Total Number of Sites by Taxa Group for Special Attention Plant Species (9/30/98).

Taxa Group (#species)	Federal Listed	Federal Candidate	Bureau Sensitive	Assessment Species	Tracking Species
Fungi	11	6	0	65	34
Lichens	0	5	3	5	381
Bryophytes	51	1	0	1	11
Vascular Plants	0	20	20	0	0
Totals	62	32	23	71	426

Table 8. Total Number of Species by Taxa Group for Species Attention Plant Species (9/30/98).

Taxa Group (#species)	Federal Listed	Federal Candidate	Bureau Sensitive	Assessment Species	Tracking Species
Fungi	1	1	0	9	5
Lichens	0	3	1	3	28
Bryophytes	2	1	0	1	3
Vascular Plants	0	3	3	0	0
Total	3	8	4	13	36

Port-Orford Cedar

Port-Orford cedar trees growing near roads and streams are at risk for infection by a root disease caused by a water mold *Phytophthora lateralis*. Port Orford cedar will eventually be killed when exposed to this pathogen which is carried in mud and water. Beginning in FY 1998 and continuing into FY 1999, an extensive photo survey is being conducted to detect and map localities of dead or dying Port Orford cedar. Field surveys are on-going to identify locations of healthy Port Orford cedar throughout the landscape.

At ground-level, extensive roadside surveys have been completed while from the air, using a helicopter equipped with a Global Positioning System, has been used to further map the extent of *Phytophthora lateralis* infestations.

Mitigations required by the Roseburg District to lessen the spread of this disease have included timber sale purchasers to wash vehicles, sanitizing roadside Port Orford cedar, gating roads, upgrading surfacing of roads to minimize mud spread, seasonal restrictions on road use, mandating sequence of harvesting, and excluding the cutting of Port Orford cedar boughs.

Last year, a ten-acre long-term research site was installed on the district to test the genetic variation of this species. This information will eventually assist geneticists and silviculturists to identify reforestation seed zones and elevation bands. A second, smaller research site is also annually planted to determine the validity of a genetic screening process developed at Oregon State University. As part of this procedure, the district selected and screened approximately 250 parent trees.

Many of these mapping procedures, research projects, and programmatic mitigations are being undertaken by two other BLM districts that also have Port Orford cedar (Coos Bay and Medford), assisted in a zone Port Orford cedar coordinator who is located on the Roseburg District.

Special Areas

Areas of Critical Environmental Concern/Research Natural Areas:

The Roseburg District has 12 special areas that total 11,323 acres. Defensibility monitoring has been conducted annually on all ACEC/RNAs. Habitat has been restored from unauthorized use on one ACEC/RNA and noxious weeds have been controlled on two other ACEC/RNAs. A checklist for vascular plants is currently in preparation for publication for the Myrtle Island ACEC/RNA. Baseline fungi, lichen, and bryophyte inventories have been completed at six ACEC/RNAs, one ACEC, and one candidate ACEC. Baseline fungus inventories are currently being conducted. Draft management plans have been completed for two ACEC/RNAs and two more management plans are in preparation.

Seven ACECs were nominated by the public in the Final RMP. Four of these nominations are currently being reviewed by the South River Resource Area. All nominated areas are being managed to protect the proposed relevant and important values. Land acquisition proposed in the Final RMP to expand the Beatty Creek ACEC/RNA has not been pursued.

Wild and Scenic Rivers:

Objective: Manage designated components of the National Wild and Scenic Rivers System by protecting their outstandingly remarkable values (ORVs) and maintain and enhance the natural integrity of river-related values.

Recreation use on the North Umpqua Wild and Scenic River was documented in the 1996, 1997 and 1998 North Umpqua River Use Report. An summary follows with emphasis on measurable units of accomplishment.

Wild and Scenic Rivers Managed: North Umpqua Wild & Scenic River, designated through the Omnibus Oregon Wild & Scenic Rivers Act of 1988.

<u>River Segment</u>	<u>BLM Miles</u>	<u>Classification</u>	<u>Miles</u>
North Umpqua	8.4	Recreational	8.4

Outstandingly Remarkable Values (ORVs) monitored included Fish, Water, Recreation, Scenery, and Cultural Resources. Protection of the ORVs occurred between 1996 - 1998 through a coordinated monitoring plan with the Umpqua National Forest.

High-level monitoring of recreation use in the North Umpqua River was conducted daily between mid May and mid-Sept. each year through a Cooperative Management Agreement between the Roseburg District BLM and the Umpqua National Forest, North Umpqua Ranger District. BLM had the lead on monitoring in the entire river corridor; USFS had the lead on issuing Special Recreation Permits (14) to

commercial river permittees. Employees engaged in monitoring included one full time BLM River Manager and one temporary USFS person. BLM covered the salary of the USFS temporary employee. Objectives of the river surveys were to:

- ! Identify types of recreation use occurring on the river.
- ! Provide a BLM/USFS presence on the river to contact, inform, and educate public users.
- ! Document visitor use including commercial and public use.
- ! Coordinate management of the river between the BLM and Umpqua National Forest.
- ! Identify, minimize and manage safety hazards and user conflicts on the North Umpqua River.

Table 9. Adjusted Visitor Use for Boating on the North Umpqua River

	<u>1996</u>	<u>1997</u>	<u>1998</u>
Private Boating Visits on N. Umpqua River	3,605	4,405	4,343
Commercial Boating Visits on North Umpqua River	2,541	2,360	2,270
Boating Visits on BLM section of North Umpqua River	800	790	680

The five river segments found eligible for inclusion into the National Wild & Scenic Rivers System, three were not assessed for suitability because they did not meet minimum suitability requirements (Cow Creek, South Umpqua River, Umpqua River). The two which were assessed for suitability (Canton Creek, Smith River) were determined to be unsuitable for designation in the National Wild & Scenic River system. The corridor width for rivers found eligible or studied for suitability is defined as 1/4-mile on either side of the river. Under interim protective management, all authorized actions on BLM administered land within a 1/2-mile wide corridor have had either a positive or neutral effect on identified ORVs that resulted in rivers being found eligible/suitable.

Interim management for Roseburg District Eligible Recreational Rivers has been to exclude timber harvest in the riparian reserves, moderately restrict development of leaseable and saleable minerals, and protect a segment's free flowing values and identified ORVs. In undesignated segments, BLM has provided interim protective management for ORVs identified on BLM-lands along river segments determined eligible but not studied for inclusion as components of the National Wild & Scenic Rivers System.

BLM actions and BLM authorized actions have been consistent during the monitoring period with protection of the ORVs of the designated North Umpqua Wild and Scenic River.

Annually, actions and research proposals within and adjacent to Wild & Scenic River corridors have been reviewed by Resource Area specialists to determine whether the possibility of impacts on the ORVs were considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions were reviewed on the ground, after completion, to ascertain whether it was actually implemented.

Cultural Resources

In fiscal year 1998, the cultural resources program was involved in a joint Partners in Time (PIT) project that involved 200 volunteer hours contributed for field work on a looted archeological site and a

\$5,000 contract for analysis and write-up; the North Bank Native American archeological site project which involved 370 volunteer hours plus 530 BLM volunteer employee hours and a \$20,000 contract for supervision of excavation, analysis and write-up; the Replica Archeological Site project which involved \$5,000 spent for two ASE students to build a replica site for future excavation by Roseburg area school children.

In addition, the cultural resource program on the Roseburg District supported the district timber program through the expenditure of \$154,000 on eight contracts that evaluated 22 sites; and supported the recreation program through the expenditure of \$47,000 on three contracts that evaluated three sites.

During fiscal years 1996-1998 the cultural resources program was involved in continuing clearance of ground disturbing project for district programs. In 1996, the district excavated a Native American archeological site at Susan Creek, Passports in Time (PIT) project which involved 30 volunteers. A radiocarbon assay from the pre-mazama component returned a date of 8,400 years ago, the oldest date so far recorded on the Umpqua Basin. In 1997, the district began excavation of an American Indian archeological site at North Bank Habitat Management Area which involved 70 volunteers. This project was continued in 1998.

Visual Resources

Roseburg BLM lands were monitored to meet the following visual quality objectives:

<u>Class</u>	<u>Guidance</u>
VRM I:	Preserve the existing character of landscapes.
VRM II:	Retain the existing character of landscapes.
VRM III:	Partially retain the existing character of landscapes.
VRM IV:	Allow major modifications of existing character of landscapes.

In the Roseburg District, there is the following classification of lands:

<u>Class</u>	<u>Acres</u>
VRM I	28
VRM II	18,045
VRM III	4,385
VRM IV	396,546

District VRM specialists (outdoor recreation planners) analyzed all surface disturbing actions which contained any VRM II or III areas during the three year period. There were no actions in VRM I areas. There were seven proposed actions in VRM II or III areas. Twenty percent of timber sales and other substantial projects in VRM Class II or III areas were required to be reviewed to ascertain whether relevant design features or mitigating measures would be included. The actual number of environmental assessments reviewed in the Roseburg District was 100% of all actions (not only Timber) in VRM II and III areas. Visual resource design features and mitigation methods were implemented in these areas and in one case, the proposed timber harvest unit was dropped from further consideration (due to VRM and other social and resource factors). In the South River Resource Area, all timber

proposed actions with VRM II or III were analyzed, totaling four. In the Swiftwater Resource Area, all environmental assessments had VRM input regardless of VRM classification. Districtwide, the total number of environmental assessments analyzed for VRM were eleven in 1996, twelve in 1997 and nine in 1998.

As needed, the visual resource contrast rating system was used during project level planning to determine whether or not proposed activities will meet VRM objectives. Mitigation measures were used to reduce visual contrasts.

VRM Class II lands were managed for low levels of change to the characteristic landscape. Management activities may be seen but did not attract the attention of the casual observer. Changes repeated the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

VRM Class III lands were managed for moderate levels of change to the characteristic landscape. Management activities could attract attention but did not dominate the view of the casual observer. Changes should repeated the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

VRM Class IV lands were managed for moderate levels of change to the characteristic landscape. Management activities could dominate the view and be the major focus of viewer attention. However, every attempt was made to minimize the effect of the activities through careful location, minimal disturbance, and repeating the basic elements of form, line, color and texture.

Rural Interface Areas

There were no projects in the Rural Interface Areas during fiscal years 1996-1998.

Socioeconomic

Employment Trends

Since implementation of the Roseburg District Plan in 1995, Oregon and the United States have benefitted from a robust economy. Douglas County also seemed to benefit from strong economic conditions, adding over 1,000 new jobs per year. This is very different from the 1991-1992 national recessionary period where Douglas County was particularly hard hit, losing 2,000 jobs when compared to 1990 employment. The county regained 1990 employment levels in 1995.

Douglas County 1997 total wage and salary employment was 44,930 an increase of 18.4% from the 1984-88 baseline period used in the Resource Management Plan. This does not compare favorably to the statewide employment increase of 42.7%, for the same period. A major cause of relatively low employment growth has been significant job losses in the Lumber and Wood Products sector. In 1988 Lumber and Wood Products employment in the county, peaked at 8,790 jobs. In the following 5 years, employment nosedived. Reaching a low of 5,970 in 1993, a 32% decrease. 1994 through

1997 were years of slightly increasing Lumber and Wood Products employment, adding a total of 360 jobs. Statewide, Lumber and Wood Products employment has decreased by 15,160, or about 20% since the baseline period, to 59,900. The decline in wood products employment is less than would be anticipated given the 50% decline in harvests. Factors such as decreased exports and manufactured home building employment have had an offsetting effect. Since the 1984-88 baseline period, Douglas County's economy has shown strength in other sectors. Jobs have been added in Construction and Mining, Other Manufacturing, Services, and Trade.

See Tables 10 and 11 for detailed information on employment by industry for Oregon and Douglas County.

Receipts and Distributions

Forest Development

FY 1996, 11 contracts	\$950,000
FY 1997, 20 contracts	\$1,150,000
FY 1998, 20 contracts	\$1,542,000
Total 1996-1998, 51 contracts	\$3,642,000

Jobs-in-the-Woods

FY 1996	\$1,075,000
FY 1997	\$1,000,000
FY 1998	\$1,200,000

Timber sale collections

	<u>1996</u>	<u>1997</u>	<u>1998</u>
Oregon and California Railroad Lands (O&C)	\$18,062,961	\$9,344,885	\$10,231,933
Coos Bay Wagon Road Lands (CBWR)	\$653,889	\$2,533	0
Public Domain Lands (PD)	\$3,796,970	\$10,590	\$57,210
Total	\$22,513,820	\$9,358,008	\$10,289,143

Payments to Douglas County

	<u>1996</u>	<u>1997</u>	<u>1998</u>
Oregon and California Railroad Lands and Coos Bay Wagon Road Lands (O&C/CBWR)	\$18,366,586	\$17,669,120	\$16,906,721
Payment in Lieu of Taxes (PILT)	\$231,578	\$91,143	\$230,399
Total	\$18,598,164	\$17,760,263	\$17,137,120

	<u>1996</u>	<u>1997</u>	<u>1998</u>
Value of timber sales, oral auction and negotiated	\$19,000,000	\$21,102,854	\$17,445,591

Jobs-in-the-Woods:

The Jobs-in-the-Woods program was established to mitigate the economic and social impacts of reduced timber harvesting under the Northwest Forest Plan while investing in the ecosystem. Fiscal year 1998, which was the fifth year for this program. Budgets for Jobs-in-the-Woods on the Roseburg District have been: fiscal year 1996-\$1,075,000, 1997-\$1,000,000, and 1998-\$1,200,000. Thirty-

one projects were funded through contracts on the district under this program in fiscal year 1996-1998 to accomplish work such as road restoration, renovation or upgrade to benefit watersheds, culvert replacements to aid fish passage and to better accommodate water flows associated with large storms, and placement of trees in creeks to enhance spawning gravel and resting ponds for fish. The Roseburg District continues to work closely with partnerships to accomplish the work and provide displaced workers with longer term, high skill family-wage jobs.

Environmental Justice:

Executive Order 12898 of February 11, 1994, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” directs all federal agencies to “...make achieving environmental justice part of its mission by identifying and addressing . . . disproportionately high and adverse human health or environmental effects of it’s programs, policies and activities.”

New projects with possible effects on minority populations and/or low-income populations will incorporate an analysis of Environmental Justice impacts to ensure any disproportionately high and adverse human health or environmental effects are identified, and reduced to acceptable levels if possible.

Table 10. Resident Labor Force, Employment by Industry, Oregon

		Average 1984-88									
1970	1980	Baseline	1990	1991	1992	1993	1994	1995	1996	1997	
Civilian Labor Force	864,500	1,295,000	1,362,400	1,491,000	1,508,000	154,200	1,596,000	1,640,000	1,656,200	1,719,700	1,731,700
Unemployment	61,700	107,000	104,800	82,000	90,000	116,000	116,000	89,000	80,300	101,600	100,900
Total Wage and Salary Emp.	709,200	1,044,600	1,068,680	1,251,900	1,250,800	1,274,200	1,308,400	1,362,900	1,418,400	1,474,600	1,524,900
Total Manufacturing	172,300	215,100	203,240	220,300	211,700	209,000	211,700	221,300	229,300	235,800	243,700
>Lumber & Wood Products (& Paper)	76,200	79,900	75,060	73,200	65,800	63,800	62,700	63,300	61,300	59,800	59,900
>Other Manufacturing	96,100	135,200	128,180	147,100	145,900	145,200	149,000	158,000	168,000	176,000	183,800
Total Non-Manufacturing	536,900	829,500	865,440	1,031,600	1,039,000	1,065,200	1,096,700	1,141,600	1,189,100	1,238,900	1,281,100
>Const. & Mining	30,800	48,800	35,800	54,000	53,000	52,000	55,700	62,900	70,400	79,400	83,500
>Trans., Comm. & Utilities	48,700	60,500	58,040	64,500	65,200	65,700	66,800	68,900	71,300	73,500	74,100
>Trade	162,000	255,600	269,680	313,100	314,300	318,700	328,900	344,100	357,000	365,900	377,500
>Finance, Ins. & Real Est.	36,000	70,000	69,360	80,300	83,200	86,000	84,600	87,800	87,200	91,000	95,100
>Services & Misc.	112,700	191,400	231,180	296,200	296,900	311,800	328,300	343,200	362,900	382,600	400,500
>Government	146,700	203,200	201,360	223,500	226,400	231,000	232,600	234,700	240,200	246,600	250,400

Table 11. Resident Labor Force, Employment by Industry, Douglas County

	1970	1980	1984	1985	1986	1987	1988	Average 1984-88 Baseline	1990	1991	1992	1993	1994	1995	1996	1997
Civilian Labor Force	27,630	41,780	41,540	42,440	43,620	43,920	45,010	43,306	45,520	44,660	42,310	43,010	42,990	43,360	44,490	44,930
Unemployment	2,490	5,180	5,030	4,910	4,280	3,330	3,470	4,204	3,820	4,490	5,050	5,070	3,920	3,480	3,980	3,950
Total Wage and Salary Emp.	21,980	30,850	29,580	29,640	30,810	31,590	32,720	30,868	33,580	32,130	31,580	31,900	32,850	34,170	35,140	36,560
Total Manufacturing	8,990	9,430	9,300	9,360	10,080	10,320	10,400	9,892	9,990	8,870	8,000	7,910	7,980	8,340	8,450	8,860
>Lumber & Wood Products	7,490	7,600	7,620	7,640	8,450	8,700	8,790	8,240	8,230	6,920	6,020	5,970	6,020	6,070	6,110	6,330
>Other Manufacturing	1,500	1,830	1,680	1,720	1,630	1,620	1,610	1,652	1,760	1,950	2,980	1,940	1,960	2,270	2,340	2,530
Total Non-Manufacturing	12,990	21,420	20,280	20,280	20,730	21,270	22,320	20,976	23,590	23,270	23,580	23,990	24,880	25,830	26,690	27,700
>Const. & Mining	710	1,490	770	780	720	760	840	774	1,000	990	990	1,080	1,170	1,260	1,360	1,380
>Trans., Comm. & Utilities	1,030	1,300	1,290	1,390	1,550	1,570	1,600	1,480	1,720	1,560	1,500	1,500	1,520	1,540	1,590	1,630
>Trade	3,440	5,730	6,070	5,900	5,930	6,100	6,550	6,110	6,870	6,740	6,850	7,040	7,390	7,820	7,930	8,210
>Finance, Ins. & Real Est.	770	1,240	1,030	1,000	990	960	930	982	960	980	940	1,100	1,130	1,140	1,160	1,290
>Services & Misc.	2,400	4,600	4,740	4,920	5,170	5,430	5,770	5,206	6,050	5,960	6,240	6,480	6,800	6,810	7,020	7,320
>Government	4,640	7,060	6,390	6,300	6,380	6,450	6,630	6,430	7,000	7,030	7,050	7,020	6,870	7,260	7,630	7,870

Recreation

1998 Recreation Program Summary

Recreation use statistics have been tracked and documented through the Recreation Management Information System (RMIS). The 1998 summary follows.

Number of BLM Acres on the Roseburg District:	425,588 acres
Swiftwater Resource Area	223,205 acres
South River Resource Area	202,383 acres

Extensive & Special Recreation Management Areas (ERMA / SRMA)

Resource Area	ERMA Acres	SRMA / Acres
Swiftwater R.A.	219,243 ac.	North Umpqua River / 1,722 Umpqua River / 2,240
South River	200,673 ac.	Cow Creek / 1,710

North Umpqua River SRMA:

North Umpqua W&SR Area	1,620 acres
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Satellite Areas:

Millpond Rec. Site	20
Rock Cr. Rec Site	38
Scaredman Rec. Site	20
Cavitt Cr. Rec Site	21
Wolf Cr. Falls Trail	<u>3</u>
Total	1,722 acres

Number of recreation visits on Roseburg District BLM lands: 360,100.

Number of recreation participants on Roseburg District BLM lands: 956,830 (one visitor participating in several recreation activities)

Developed Recreation Sites and Use Statistics:

<u>Developed Sites:</u>	<u>No. of Visits</u>
14	
Susan Creek Campground	9,500
Susan Creek Day-Use Area	25,000
Rock Creek Recreation Site	3,500
Millpond Recreation Site	6,500
Cavitt Creek Recreation Site	3,500
Tyee Recreation Site	6,000
Scaredman Recreation Site	2,500

Swiftwater Recreation Area	100,000
Wolf Creek Trailhead	2,000
Swiftwater Trailhead	30,000
Lone Rock Boat Launch	1,000
Cow Cr. Rec. Gold Panning Area	1,200
Osprey Boat Ramp	3,500
Miner-Wolf WW Site	880

Recreation Use Permits issued at campgrounds: 3,597
Fees Collected: \$51,050

Recreation Use Permits issued for pavilion use: 34
Fees Collected: \$1,810

Recreation Trails Managed: 8 Trails; 14.4 miles total.

Table 12. Roseburg District Recreation Trails.

	Miles	Hiking	Horse back Riding	Disabled Access	River Frontage	Mountain Biking	Interpretive
Wolf Creek	1.2	X			X	X	
Rock Creek	.3	X			X		
Susan Creek Picnic Trail	.5	X			X	X	
Susan Creek Watchable Wildlife Trail	.2	X		X	X	X	X
North Umpqua	11.0	X	X		X	X	X
Deadline Falls	.1	X		X	X	X	X
Susan Creek Falls	0.8	X		X	X		
Miner-Wolf Creek	.3	X		X	X		X

Special Recreation Permits Issued - 14 commercial outfitter permits on North Umpqua River were issued by cooperative management agreement through the Umpqua National Forest, North Umpqua Ranger District. BLM collected \$700 in use fees. One SPR issued for Cycle Oregon event. \$2,625 in use fees collected.

Off-highway Vehicle Designations Managed:

Limited: 422,464 acres
Closed: 3,124 acres

Partnerships / Volunteer work: Eighteen volunteer groups participated including:

Douglas County Inmates, 4 Eagle Scout candidates, 2 Boy Scout Troops, 2 School groups, 1 Church group, 2 Individuals, Job Corps, and 5 Campground Hosts (includes individual, couples and family)

Table 13. 1998 Volunteer Statistics.

Group	Hours volunteered	Value of work
All groups excluding hosts	3761	\$ 26,327
Campground hosts	15,200	\$ 152,000
All groups total:	18,961	\$ 178,327

Types of recreation projects and work completed:

Rocking, brushing, mulching and limbing trails.
Revegetating recreation sites.
Installing fences, barriers and safety railing.
Cleaning recreation sites; weeding, removing debris & graffiti.
Building and installing benches and wood/cement picnic tables.
Cutting and stacking firewood.
Installing curb and culverts along hiking trails.
Building new trail around slipouts.
Repairing bridges and puncheons.
Placing crushed rock in rec. pads and along campground roads.
Upgrading accessibility standards on recreation trails.
Performing a wide variety of duties assigned to campground hosts.

Back Country Byways Managed:

North Umpqua Scenic Byway - 8.4 miles,
Cow Creek Back Country Byway - 45 miles

Major Projects Completed:

- ! Issued a special recreation use permit and hosted the 1998 Cycle Oregon event on Roseburg District with 2000 cyclists and 500 support people.
- ! Completed an extensive renovation of Scaredman Campground.
- ! Developed new recreation brochures including "Thundering Waters" waterfalls brochure with the Umpqua National Forest, and six RDO campground brochures.
- ! Completed several Recreation Timber Pipeline projects, including:
 - Repaving Tyee Recreation Site and construction of new host shelter,
 - Renovation of viewing platform at Susan Creek Falls,
 - Replacement of Rock Creek Day-Use Area restroom,
 - Initiation of cultural inventories/evaluation at three recreation sites.
- ! Completed American Disabilities Act (ADA) upgrades including accessible picnic tables, trails, restrooms and viewing area at Susan Cr. Falls, Rock Cr. Rec. Site, Scaredman, Cavitt Cr. Falls, and Millpond Campgrounds, Swiftwater Trailhead and Day-Use Area.

Hazard Tree assessments were completed at all developed recreation sites on the District. Management (treatment) of hazard trees was conducted at Susan Creek Campground, Susan Creek Day-Use Area/ Falls Trail, Rock Creek Recreation Site, Millpond Recreation Site, Cavitt Creek Recreation Site, Scaredman Recreation Site, Miner-Wolf Watchable Wildlife Site, and on the North Umpqua Trail - Tioga Segment. Treatment consisted of a combination of limbing trees, blasting tree tops, or felling of hazard trees.

Reported public fatalities or serious injuries in 1998: None.

Status of Recreation Plans:

- North Umpqua Wild and Scenic River Management Plan - Completed June 1992.
- North Umpqua SRMA Recreation Area Management Plan - Completed 1988.
- Cow Creek SRMA Recreation Area Management Plan - Partially Complete.
- Umpqua River SRMA Recreation Area Management Plan - Not started.
- Roseburg District Off-Highway Vehicle Implementation Plan - Completed 1997

Timber Sale Pipeline Restoration Funds

Twenty-five percent of these funds are dedicated to recreation backlog projects on O&C Districts of Western Oregon. The funds are intended to reduce infrastructure replacement or facility maintenance needs and resolve critical visitor safety or recreation management needs or issues identified in land use plans. Recreation site resource protection needs can also be met. During the first year of implementation in FY 1998, the Roseburg District obligated \$218,500 of recreation pipeline funds to the following projects:

- ! Paving and renovation of Tyee Recreation Site. Placement of host shelter.
- ! Replacement of restroom at Cavitt Creek Campground.
- ! Replacement of dilapidated picnic tables at several recreation sites.
- ! Cultural inventory and evaluation at Susan Cr. Day-use Area and Cavitt Creek campground, preparatory to major recreation site renovations. .
- ! Pavilion construction at Rock Creek Recreation Site.
- ! Fence replacement at Eagleview Day-use Area
- ! Gravel parking at North Bank Ranch west entrance.

Planning was also performed to prepare for an additional \$705,000 worth of projects in FY-1999 involving seven recreation sites and a variety of renovation projects.

Recreation Fee Demonstration Project

In March 1998, the Roseburg District received approval for establishing its Recreation Pilot Fee Demonstration Project under the authority of Public Law 104-134, Section 315. This authority allows the retention and expenditure of recreation fees for operations and maintenance of recreation sites where the fees were collected. A special account was established for the District, in which fees for camping and pavilion use at Susan Creek, Mill Pond, Rock Creek, Cavitt Creek, and Tyee Recreation Sites, and special recreation permits would be deposited.

At the end of FY 1998, a total of \$55,485 was deposited. Receipts included \$52,860 from campground and pavilion fees, and \$2,625 from one Special Recreation Permit. The only expenditure was for the paving contract at Tyee Recreation Site for \$4,265. This low amount was due to the late start of the program in the year and because the year's work had already been funded prior to receipt of the monies. The remainder was carried over into FY 1999 and has been targeted for a variety of recreation maintenance / enhancement projects.

Recreation Program Summary 1996 - 1998

Recreation use statistics were tracked and documented in the annual Recreation Management Information System (RMIS) reports for 1996, 1997, and 1998. A summary of the three years follows for the Roseburg District BLM Recreation program.

The units of land managed as extensive recreation management areas remained constant during the 1996-1998 period, as did the lands managed as special recreation management areas (SRMA): Cow Creek SRMA - Umpqua River SRMA - North Umpqua SRMA.

The number of recreation visits on Roseburg District BLM lands increased each year:

321,345 visits in 1996
347,580 visits in 1997
360,100 visits in 1998
1,029,025 total visits

The number of recreation participants on Roseburg District BLM lands increased annually: (one visitor regularly participates in several recreation activities)

861,100 participants in 1996
890,227 participants in 1997
956,830 participants in 1998
2,708,157 total participants

There were 14 developed recreation sites managed during the period. No new sites were developed. All sites were maintained and upgraded according to: public needs, safety hazards, ADA requirements, and availability of funding and personnel.

Recreation Use Permits issued at campgrounds remained close each year:

3,528 permits issued for campgrounds in 1996. Fees collected - \$46,649.
3,636 permits issued for campgrounds in 1997. Fees collected - \$57,015.
3,597 permits issued for campgrounds in 1998. Fees collected - \$51,050.
10,761 permits issued.

Recreation permits issued for pavilion use.

30 permits issued in 1996. Fees collected - \$1,665.
26 permits issued in 1997. Fees collected - \$520.
34 permits issued in 1998. Fees Collected - \$1,810.
90 permits issued.

Eight recreation trails were managed during the period with a total of 14.4 miles. Major upgrades for accessibility to the disabled were made on four of the eight.

Fourteen commercial outfitter permits were issued annually on North Umpqua River through cooperative management agreement with the Umpqua National Forest, North Umpqua Ranger District. One additional SPR was issued each year for either mountain bike outfitter guide or Cycle

Oregon.

No changes to Off-highway Vehicle (OHV) designations were made during the period. BLM managed 422,464 acres in the Limited category, and 3,124 acres in the Closed category. The District does not host any popular OHV riding areas outside of local use and interest.

Annual volunteer work increased each year. Partners were Douglas County Inmates, Eagle Scout candidates, Boy Scout Troops, School groups, Church groups, Job Corps, and Campground Hosts. The significant increase in hours in 1997 and 1998 resulted from more use of the Douglas County Inmates in recreation site projects.

Table 14. Partnership and Volunteers

Year	Partnerships	Hours volunteered	Value of work
1996	13	5,415	\$ 50,900
1997	16	12,924	\$ 121,500
1998	18	18,961	\$ 178,300
Total	47	37,300	\$ 350,700

Back Country Byways Managed:

North Umpqua Scenic Byway - 8.4 miles,
Cow Creek Back Country Byway - 45 miles

Major Projects, Plans and Partnerships Completed During the 1996 - 1998 Period:

Completed renovation of Scaredman Campground, repaving of Tyee Recreation Site and construction of new host shelter, renovation of viewing platform at Susan Creek Falls, replacement of Rock Creek day-use area restroom and Cavitt Cr. Falls restroom.

Completed extensive reconstruction of Millpond Campground including new water system, paved campground loop and day-use area, revegetation project, and new restrooms built to ADA standards.

Developed new recreation brochures including "Thundering Waters" waterfalls brochure with the Umpqua National Forest, six campground brochures, Miner-Wolf Watchable Wildlife Site brochure and Cow Creek Back Country Byway brochure.

Completed cultural inventories/evaluation at three recreation sites.

Completed ADA upgrades including accessible picnic tables, trails, restrooms and viewing area at Susan Cr. Falls, Rock Cr. Rec. Site, Scaredman, Cavitt Cr. Falls, and Millpond Campgrounds, Swiftwater Trailhead and Swiftwater Day-Use Area.

Reconstructed Susan Creek Falls Trail to meet ADA standards.

Completed major damage repairs from November Floods of 1996 at Swiftwater, Millpond, Rock Creek, Miner-Wolf, Susan Creek and Osprey Boat Ramp.

Enhanced and improved access on the China Ditch Auto Tour loop.

Organized annual Free-fishing Day Event at Cooper Creek Reservoir in partnership with Oregon Dept. of Fish and Wildlife, U.S. Fish and Wildlife Service, U.S. Forest Service, and Douglas County Parks Dept. (BLM lead)

Staffed the Colliding Rivers Information Center in Glide, OR. in partnership with the Roseburg Visitor's and Convention Bureau and the Umpqua National Forest.

Completed an OHV Implementation Plan for the Roseburg District.

Developed and implemented the recreation signing program.

Partnershiped with the USFS on seasonal monitoring of the North Umpqua Wild and Scenic River.

Developed five joint USFS/BLM displays for the annual Douglas County Fair and Outdoor Recreation Show.

Hazard Tree assessments were completed annually at developed recreation sites, with more emphasis on some sites than others on a rotating basis. Treatments consisted of a combination of de-limbing trees, blasting tree tops, or felling hazard trees.

There were no reported public fatalities or serious injuries during the 3 year period as a result of any recreational activity participated in on Roseburg District BLM lands.

Forest Management and Timber Resources

The Roseburg District manages approximately 425,000 acres of land located mostly in Douglas County and in the Umpqua River basin. Under the Northwest Forest Plan, approximately 81,800 acres (or 19% of the Roseburg District land base) are available for timber harvest. The Northwest Forest Plan and the Roseburg District Resource Management Plan provide for a sustainable timber harvest, known as the Allowable Sale Quantity (ASQ), from Roseburg District administered public lands of 45 MMBF (million board feet) annually. The district offered 44.5 MMBF in fiscal year 1998.

To meet the ASQ commitment, the Roseburg District must do timber sale planning including preparing an environmental analysis, conducting timber sale preparation through cruising, appraisals, contract preparation and timber sale advertising, and timber sale administration which includes auctioning the timber sales and ensuring contract compliance of awarded timber sales. Importantly, the Roseburg District is investing in the future of the forests through forest development and reforestation.

The harvesting of forest products is being used to meet other management goals. Examples of this include encouraging the development of multi-layered forest canopies, creating or improving wildlife and

fisheries habitats, species diversity, and watershed conditions. Other ways that the Roseburg District is using timber harvest to meet management goals include identifying and leaving snags for cavity dwelling species, and leaving woody debris for habitat improvement.

In fiscal year 1998, Roseburg District sold 12 timber sales at auction and 15 negotiated sales of minor volume. The value of these sold timber sales was over \$17,000,000. The monies associated with these timber sales is paid as the timber is harvested over the life of the contracts, which is generally three years. Timber sale collection for fiscal year 1998 from active harvesting was \$10,231,933 for Oregon and California Railroad Lands (O&C), \$57,210 for Public Domain Lands (PD), and none for Coos Bay Wagon Road Lands (CBWR). See Socioeconomic page 27.

Below is a summary by land use allocation of timber volume and acres of these timber sales. In addition, the harvest prescription of regeneration harvest, thinning, density management or salvage is identified. All regeneration harvest occurred in stands over minimum harvest age of 60 years. No stands in FY 1996-1998 received a regeneration harvest that were less than the culmination of mean annual increment age of 80-110 years.

The figures given for various activities below for fiscal year 1996 and 1997 differ somewhat to those previously published in the Roseburg District Annual Program Summary for 1996 and 1997. These differences are due to a combination of circumstances. In fiscal year 1998, the Roseburg District implemented a new accounting system that contained more categories and adopted a new electronic system. In addition, during the compilation of this information for the three year summary contained in this year's Annual Program Summary, it was discovered that there was a need for more frequent quality checks on the data. This adaptive management information is a result of the district's rigorous review in 1998 of the data.

Table 15. Roseburg District Timber Sale Volume and Acres.

MBF	FY 95 ¹	FY 96	FY 97	FY 98	1996-1998 Total	1996-1998 Annual Average	1996-1998 Average RMP/EIS Assumed Annual Average	Percent of Assumed Average
Total Timber Sale Vol.	16,459	45,993	51,783	44,545	142,321	47,440	49,500	90%
Matrix Timber Sale Vol.	14,442	42,250	47,611	37,817	127,678	42,559	45,000	94%
GFMA Regen. Timber Sale Vol.	13,292	33,061	27,708	24,742	85,511	2,850		
GFMA Comm. Thin TS Vol.	1,178	3,016	2,907	3,451	9,419	3,139		
GFMA Salvage TS Vol.	207	929	3,384	1,309	5,622	1,874		
C/D Block Regen. TS Vol.	1,130	865	5,123	5,890	11,878	3,959		
C/D Block Comm Thin TS Vol.	0	2,978	3,455	1,739	8,172	2,724		
C/D Block Salvage TS Vol.	53	206	117	576	899	300		
RR Density Mgt. TS Vol.	0	2,424	2,175	811	5,410	1,803		
RR Salvage TS Vol.	0	55	3	236	294	98		
LSR Density Mgt. TS Vol.	0	102	1,728	5,559	7,389	2,463		
LSR Salvage TS Vol.	0	1,162	266	123	1,551	517		
Total All Reserves	0	3,743	4,172	6,729	14,644	4,881	4,500	108%
Key Watershed TS Vol. from Matrix	0	8,439	18,392	12,765	39,597	13,199	8,300	159%
Little River AMA TS Vol.	0	1,033	4,682	30	5,745	1,915	4,600	45%
Little River AMA Salvage Vol.	17	162	236	81	479	160		
Little River AMA Total Vol.		1,195	4,918	111	6,224	2,075		
<u>Acres</u>								
Total Regeneration Harvest	386	906	904	800	2,610	870	1,190	73%
Total Commercial thinning	55	666	740	592	1,998	666	84	792%
Total Density Management	44	5	128	427	560	186	166	112%
GFMA Regeneration Harvest	354	889	726	649	2,264	754		
GFMA Commercial thinning	55	140	253	361	754	251		
GFMA Salvage	13	24	276	119	419	140		
C/D Block Regen. Harvest	32	50	123	153	326	109		
C/D Block Comm. Thinning	0	220	276	175	671	223		
CID Block Salvage	4	25	25	50	100	33		
RR Density Management	0	216	188	97	501	167		
RR Salvage	0	4	0	20	24	8		
LSR Density Management	0	0	113	386	499	166		
LSR Salvage	0	96	33	8	137	46		
Total All Reserves	0	316	334	511	1,161	387		
Little River AMA Regeneration Harvest	0	0	68	0	68	23		
Little River AMA Thinning	0	94	134	0	228	76		
Little River AMA Salvage	1	9	36	7	52	17		

Matrix Regen totals = Regen +CC

Matrix CT totals = CT + DM + Select Cut + Understory Reduction

RR DM total = DM + CT + Select Cut

LSR DM total = DM + CT + Select Cut

LSR Salvage total = Salvage

AMA Thin total = CT + DM + Select Cut

AMA Salvage total = Salvage + ROW

¹FY 95 Figures for effective date of RMP: June - September 1995

Timber data include Recissions Act Replacement volume of 7,847 <BF

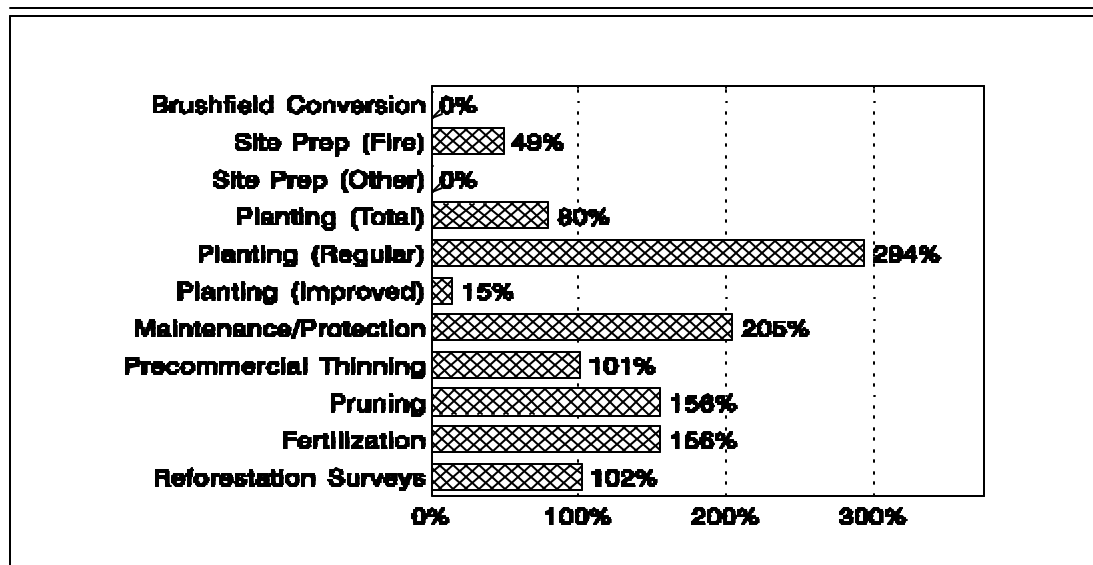
Silviculture Activities

Table 16. Roseburg District Forest Development Activities.

	FY 96	FY 97	FY 98	Totals to date	Average Annual	Projected Annual	Differences Actual- Projected
Brushfield Conversion	0	0	0	0	0	15	0
Site Preparation (fire)	252	846	149	1,247	416	840	50%
Site Preparation (other)	0	0	0	0	0	50	0
Planting (regular stock)	819	665	1,072	2,556	852	290	294%
Planting (improved stock)	187	180	157	524	175	1,140	15%
Maintenance/Protection	2,224	1,525	1,350	5,099	1,700	830	205%
PCT	3,629	3,903	4,305	11,837	3,946	3,900	101%
Pruning	331	858	957	2,146	715	460	155%
Fertilization	0	4,278	1,060	5,338	1,779	1,140	156%
Reforestation Surveys	14,563	10,736	10,830	36,129	12,043	0	0

Roseburg RMP - 3rd Year Evaluation

Accomplishments as a % of RMP Planned
Timber Resources - Silvicultural Practices



Based on 3 Years of RMP Implementation

Planting (regular) includes acres reforested with non-genetically tested Douglas-fir & all acres reforested in LBRs and CONN. Planting (improved) includes genetically tested Douglas-fir in GPMA only.

Data is for contracts awarded after October 1, 1995. Data is displayed by fiscal year of contract award and does not necessarily correspond with the year the project was actually accomplished.

Brush field Conversion - To date no acres have undergone conversion. It is not expected that any attempt would be made unless herbicides were available as a conversion tool.

Site Preparation (FIRE) - The number of acres prepared with prescribed fire is about 50% of planned. This trend may continue for some time given soils protection recommendations from interdisciplinary teams and concern for loss of retention trees, coarse woody debris, snags and survey and manage species.

Site Preparation (OTHER) - To date no acres have been reported. Activity in this category is expected in this decade.

Planting (regular stock) - Total planted acres without regard to genetic quality is at RMP planned levels. Reforestation with genetically unimproved planting stock is about 300% of planned. On the surface this constitutes a significant deviation from planned. However, a phase in period of 3-4 years was assumed to allow for older sales outside the GFMA land use allocation to be reforested and for seed orchards to reach production.

Planting (improved stock) - In FY 98, 68% of the acres reforested were planted with genetically improved stock. But, only 26% of the acres planted were in the GFMA land use allocation. Only GFMA acres count towards RMP monitoring goals since genetic improvement is assumed to contribute to ASQ only when done on GFMA acres.

The trend should shift to more improved stock planting the rest of the decade. It is too early to determine if there will be a significant deviation from the planned acreage.

Maintenance/Protection - Acres of maintenance/protection treatments is currently double of that assumed for the first three years. The ratio of maintenance/protection to reforested acres was highest in FY 96 and has declined dramatically each year since. In FY 96 the ratio was 2.2 to 1. In FY 98 the ratio is the lowest yet at 0.9 to 1. I would this current ratio to be near the likely rate for the rest of the decade. At this rate we would likely exceed planned RMP goals by about 50%.

Precommercial Thinning (PCT) - Currently PCT is at planned RMP levels. It is expected that at a minimum this level will be maintained over the decade. There is a potential to exceed this level if funding levels were to increase but the magnitude is unknown at this time. This practice is highly dependent on increasing budget levels.

Pruning - Currently pruning accomplishments are about 150% of planned RMP levels. Depending on funding this trend could continue. At a minimum it is expected that RMP levels will be met. This practice is also highly dependent on increasing budget levels.

Fertilization - Currently fertilization accomplishments are about 150% of planned RMP levels. There is a multi-year EA in preparation, which when implemented will result in accomplishments of approximately 125% of planned. Depending on funding and PCT treatment levels further

accomplishments above this could be achieved.

Below is a summary of various forest development, reforestation, silvicultural and timber stand improvement practices that were accomplished in fiscal year 1998. This work was accomplished through twenty contracts valued at approximately \$1,542,000.

Special Forest Products

In addition to the advertised timber sales described above, the district sold a variety of special forest products as shown in Table 14. The sale of special forest products follow the guidelines contained in the Oregon/Washington Special Forest Products Procedure Handbook. There are no estimates or projections in the RMP ROD or FEIS that need to be compared to the sold quantities shown.

Table 17. Special Forest Products

Product	No. of Contracts			Quantity Sold			Value \$		
	FY96	FY97	FY98	FY96	FY97	FY98	FY96	FY97	FY98
Boughs-Coniferous (lbs)	183	104	96	164,850	96,700	76,600	3,297	1,948	1,572
Burls & misc. (lbs.)	9	10	15	12,900	20,200	35,275	505	816	1,411
Christmas Trees (ea.)	266	245	217	266	245	217	1,375	1,225	1,085
Edibles & Medicinals (lbs.)	3	3	0	1,578	1,800	0	70	72	0
Floral & Greenery (lbs.)	120	128	89	69,120	83,100	48,525	3,458	4,019	3,305
Mosses - Bryophytes (lbs.)	3	4	0	6,333	1,998	0	150	60	0
Mushrooms - Fungi (lbs.)	56	50	25	1,572	2,524	1,048	393	631	262
Transplants	7	2	1	560	450	20	480	350	5
Wood Products/Firewood (bf)	<u>210</u>	<u>460</u>	<u>197</u>	267,960	600,574	352,729	<u>49,111</u>	<u>74,436</u>	<u>73,901</u>
Totals	857	1,006	640				58,839	83,557	87,541

Noxious Weeds

The objective of the noxious weed program in the Roseburg District is to contain or reduce noxious weed infestations using an integrated pest management approach. Integrated pest management includes manual, mechanical, biological, and chemical methods which are used in accordance with BLM's Records of Decision for the 1986 Northwest Area Noxious Weed Control Program Environmental Impact Statement, the 1987 Northwest Area Noxious Weed Control Program Environmental Impact Statement Supplement, and the 1995 District Integrated Weed Control Plan Environmental Assessment. The Roseburg District continues to survey BLM-administered land for noxious weeds primarily by including noxious weeds in all project clearance surveys. Approximately 1500 acres are surveyed during project clearances each year. All infestations are reported to the Oregon Department of Agriculture and the District cooperates with the department in the control of infestations.

Table 18. Noxious Weed Management Summary

Treatment	Species	FY 96 Acres	FY 97 Acres	FY 98 Acres
Manual	Gorse	1	1	1
	Scotch Broom	90	8	453
	Yellow Starthistle	21	20	1
	Rush Skeletonweed	1	-	1
	Woolly distaff thistle	-	-	1
	Thistles-Italian, bull, Canada	-	-	152
	Tansy ragwort	-	-	<u>6</u>
				615
Chemical	Scotch broom	-	-	38
	Yellow starthistle	1	1	1
	Diffuse knapweed	3	3	1
	Thistles-Italian, bull, Canada			<u>5</u>
				45
Biological	Yellow starthistle	5	-	10

Fire and Fuels Management

Under the RMP a greater amount of prescribed fire has been done through piling. Prescribed burning prescription target spring-like conditions when log fuel, duff and litter consumption and smoldering is reduced by wetter conditions and rapid mop up. Prescribed burning is implemented to improve seedling plantability and survival, reduce brush competition and reduce fuels. Prescribed fire is also used for habitat restoration or improvement. Under the RMP to date, prescribed fire for habitat purposes has been planned but not yet implemented.

Fire/Fuels Management

June to September 1995

Prescribed Fire: 332 acres
 On district wildfires: 9 fires for a total of 1.95 acres - all lightning caused
 Off district wildfires: 13 district personnel accepted assignments to 12 fires.

Fiscal Year 1996

Prescribed Fire: 304 acres
 On district wildfires: 21 fires for a total of 15.17 acres - 17 were caused by lightning, 4 were human caused
 Off district wildfires: 57 district personnel accepted assignments to 35 fires.

Fiscal Year 1997

Prescribed Fire: 872 acres
On district wildfires: 4 fires for a total of 1.61 acres; all were human caused.
Off district wildfires: No district personnel were assigned to any off district fires in 1997. One employee was detailed to the Redmond Hot Shots during 1997.

Fiscal Year 1998

Prescribed Fire: 161 acres
On district wildfires: 21 fires for a total of 13.27 acres - 19 were lightning caused and 2 were human caused
Off district wildfires: 28 district personnel accepted assignments to 27 wildfires

Total, June 1995-September 1998

Prescribed Fire: 1669 acres
On district wildfires: 54 fires for a total of 32 acres - 44 were lightning caused and 10 were human caused
Off district wildfires: 98 district personnel accepted assignments to 74 wildfires from Oregon to Florida.

Access and Rights-of-Way

Because public and private lands are intermingled within the district boundary, each party must cross the lands of the other in order to access their lands and resources such as timber. Throughout most of the district this has been accomplished through Reciprocal Logging Road Rights-of-Way Agreements with neighboring private landowners. The individual agreements and associated permits (a total of 140 on the district) are subject to the regulations which were in effect when they were executed. Additional rights-of-way have been granted for the construction of driveways, utility lines for servicing residences, domestic and irrigation water pipelines, legal ingress and egress, and communication sites.

Table 19. Access and R/W Three Year Summary.

	R/W Permit	R/W Reciprocal Agreement Assignment
Fiscal Year 1996	9	5
Fiscal Year 1997	14	3
Fiscal Year 1998	10	8
Total	33	16

Roads

A Transportation Management Plan has been developed to provide goals, objectives and guidelines for the district. The district is currently developing Transportation Management Objectives. The Transportation Management Plan will become final when the objectives are completed. The road system is being managed in accordance with both the Transportation Management Plan objectives and the Aquatic Conservation Strategy Objectives which are delineated in the Roseburg District Resource Management Plan.

The Roseburg District has approximately 3,000 miles of roads which are controlled or improved by the BLM. Timber sales are often designed such that the purchasers have responsibility for maintaining those BLM roads that are used in execution of the contract. In addition, road maintenance is accomplished on a regular basis by the district road maintenance crew.

The Roseburg District road maintenance crew maintained approximately 850 miles of road in fiscal year 1997. This is somewhat lower amount of roads miles maintained than average due to the need to address significant storm damage. The maintenance crew completed twenty-five storm damage projects valued at \$455,000. In addition, six other storm damaged areas were repaired under a contract valued at \$301,000. Other work included the maintenance of fifteen bridges and extensive road side brush cutting.

Energy and Minerals

Table 20. Roseburg District Activities

	FY 1996	FY 1997	FY 1998
Plan of Operation	1	0	0
Mining notices received & Reviewed	11	1	2
Mining claim compliance inspections	106	116	48
Notices of non-compliance issued	8	0	0
Community pit inspections	54	47	35

During FY 1996-1998 work was performed in rehabilitation of Middle Creek and the Mighty Fine Mine.

Land Tenure Adjustments

Roseburg District accepted title to 840 acres of donated land in fiscal year 1996. The land use allocation assigned to this area is General Forest Management Area. Many of the 840 acres are administratively withdrawn. Neotropical bird habitat has been identified as a management consideration in this area.

During fiscal year 1998 the district resolved four unauthorized uses, initiated one application to administratively withdraw four recreation sites that include 143 acres of public land, issued or renewed 3 leases/permits.

Hazardous Materials

Hazardous Materials issues and program are handled through a coordinator stationed in the Coos Bay District under a zoning concept for both Coos Bay and Roseburg. An Hazardous Material Contingency Plan was written and issued. Hazardous Materials issues and program are handled though a coordinator stationed in the Coos Bay District under a zoning concept for both Coos Bay and Roseburg Districts. A Hazardous Materials building will be placed at the Roseburg District office and compound site for temporary storage of hazardous materials waiting for transport to the proper facility. A Compliance Assessment for Safety, Health and the Environment (CASHE) was conducted on all

district facilities including the administration and fire warehouses, road maintenance shops, and major recreation sites. This assessment was conducted to provide the district with a list of findings and recommendations to bring the district into compliance with Federal, State and local environmental and hazardous materials safety regulations. Corrective action on many of the findings was completed in fiscal year 1998 and the remainder are scheduled for completion in fiscal year 1999.

Table 21. Hazardous Material Incident Three Year Summary.

	Incidents Requiring Response
Fiscal Year 1996	5
Fiscal Year 1997	2
Fiscal Year 1998	3

Coordination and Consultation

Federal Agencies:

During the period of June 1995 through September 1998, significant increases in cooperation and coordination between federal agencies has been accomplished. There is ongoing participation in the Southwest Oregon Provincial Executive Committee and Southwest Oregon Provincial Advisory Committee. There have been many very significant and involved interagency efforts that have included the Roseburg District BLM, US Fish and Wildlife Service, US Forest Service, National Marine Fisheries Service, Environmental Protection Agency, US Geological Survey, National Resource Conservation Service, and Bonneville Power Administration on projects such as watershed analysis, late-successional reserve assessments, the Little River Adaptive Management Area, water quality projects, transmission lines, etc. In addition, personnel from several of these agencies have been involved in project level planning, conflict resolution and Section 7 consultation under the Endangered Species Act. Significant federal agency coordination and cooperation has occurred through the Regional Interagency Executive Committee and the Regional Ecosystem Office established under the Northwest Forest Plan. Under the Northwest Forest Plan, interagency cooperation and coordination has proceed at an unprecedented level.

State of Oregon:

The Roseburg District has continued its long term working relationship with Oregon Department of Forestry, Oregon Department of Fish and Wildlife, State Historic Preservation Office, and the Oregon Department of Environmental Quality. These relationships cover diverse activities from timber sale planning to fish habitat inventory, from water quality monitoring to hazardous material cleanup and air quality maintenance to wildfire suppression.

Counties:

The Roseburg District is located primarily within Douglas County, with a small amount of acres of Roseburg District BLM-administered lands in Lane County and Jackson County. There is frequent communication between the Roseburg District and county commissioners and other county staff. This

communication involves BLM proposed projects, county projects, which may effect county lands, water quality issues and other issues. County commissioners receive copies of all major publications, project updates, and project proposals.

Cities:

The Roseburg District has memorandums of understanding with the cities of Drain, Riddle, and Canyonville. The objective of these agreement is to maintain the best water quality through Best Management Practices. A Special Land Use Permit has been issued to the City of Myrtle Creek for watershed protection which includes the city intake and the adjoining 190 acres.

Tribes:

Tribes are represented on the Southwest Oregon Provincial Interagency Executive Committee which coordinates activities within the province. The district contacts tribes directly for coordination of many projects.

Watershed Councils:

The Roseburg District is involved and supports the Umpqua Watershed Council and is represented on the Council's Technical Advisory Committee. The Council is involved in projects such as the Umpqua Basin Assessment, and fisheries and water quality issues.

Other Local Coordination and Cooperation:

The Roseburg District has a partnership with Umpqua Training and Employment to sponsor students from Wolf Creek Job Corps in their "Mentor" program. The district has hosted two Resource Apprentices funded by Umpqua Training and Employment. The district has participated as one of six partners with the Oregon Youth Conservation Corps project. The district has coordinated and contracted for 30 crew weeks of work provided by the Northwest Youth Corps.

The district developed and activated a significant telephone dial-up information line offering information to the public regarding fire levels and closures, road closures, recreation, campgrounds, pavilions, the Little River Adaptive Management Area, fire wood lots, timber sales, the Annual Program Summary and Monitoring Report, and seasonal programs such as Earthday activities and Christmas tree cutting.

Third Year Evaluation:

The Resource Management Plan requires a formal evaluation at the end of every third year after implementation begins. A third year evaluation of the Roseburg District and other western Oregon BLM districts will be conducted in fiscal year 1999. Its purpose is to determine whether there is significant cause for an amendment or revision to the plan. This is done by evaluating cumulative monitoring results and accomplishments, determining if the plan's goals were realistic and achievable in the first place and whether changed circumstances or new information have so altered the levels or methods activities or expected impacts that the plan may paint a seriously different picture than those anticipated in the Roseburg District RMP. As part of the third year evaluation, the allowable sale

quantity will be reevaluated. Public outreach was accomplished in the spring of 1998. As a result of this outreach, the Roseburg District received comments from a local interest group that provided twenty-seven issues or questions for consideration in the third year evaluation. If the evaluation concludes that the plan's goals are not achievable a plan amendment or revision will be initiated. If the evaluation concludes that land use allocations or management direction need to be modified, a plan amendment or revision may be appropriate. An analysis will address the need for either. It is expected that the results of the third year evaluation will be available for public comment in mid 1999.

Research and Education

In October 1995, BLM management identified Northwest Forest Plan implementation as the agency's top national priority. Over the next decade, the BLM will be focusing Northwest Forest Plan research in three primary areas: 1) additional dimensions of young forest stand biodiversity; 2) work on determining appropriate riparian buffer widths; whether management actions in riparian reserves can be conducted without compromising Northwest Forest Plan Aquatic Conservation Strategy Objectives including protection of Pacific salmon; and 3) work on Survey and Manage species.

Results of some of this research has begun to be available. One project which was published in the Canadian Journal of Forestry Research, "Density, ages, and growth rates in old-growth and young-growth forests in coastal Oregon", compares stand densities and growth between old and young stands in the Coast Range. The results indicate that old growth densities were much lower than current young-growth stands regenerated after harvest, and that thinning in younger stands may be needed to help speed development of old-growth characteristics. Another project (still in a review draft), "Effects of thinning on structural development in 40-100 year old Douglas-fir stands in western Oregon", indicates that thinning young Douglas-fir stands will hasten development of multi-story stands, shrub layers, and increased understory conifer regeneration. These studies suggest management activities including thinning in younger forest stands can enhance development of older forest structure and help achieve biodiversity and habitat conditions found in older forests.

This research is a forerunner to the work being undertaken to implement the Cooperative Forest Ecosystem Research (CFER) program the BLM has developed with Biological Resources Division, US Geologic Survey, Oregon State University, and Forest and Rangeland Ecosystem Science Center (FRESC), US Geologic Survey. The CFER program was initiated in June 1995. The intent of the program is to develop and convey reliable scientific information needed to successfully implement ecosystem-based management in the Pacific Northwest, especially on lands dominated by young forests and fragmented by multiple ownership. There are currently 22 research projects currently being undertaken by FRESC that have as the core area forest ecosystems. Other FRESC research includes such core areas as aquatic and wetland ecosystems, and wildlife ecology.

Information Resource Management

The ability to accomplish very complex management of diverse resources over 425,000 acres requires enormous amounts of information. In order to accomplish this management in an efficient manner, the Roseburg District employees the most up to date electronic office and geographic information system (GIS) hardware and software. There have been several recent major accomplishments concerning

information resource management.

First, the office data and electrical systems were upgraded to carry the district well into the future. All of the outdated cabling and data communications equipment were removed during the process. Next, the data connections to other districts, agencies and the Internet were completed. The district achieved its goal of providing all employees access to electronic mail, office automation software and the Internet.

Finally, and most significant to district resource management professionals, is the growth in use of the geographic information system. This electronic mapping and analysis tool is providing a means for district specialists to complete complex analyses of spatial and relational data. A large number of resource managers have recently been trained in the use of GIS software. The training has resulted in a surge of GIS use on the district.

There has been a significant continuing effort to upgrade software and hardware with the goal of simplifying work and increasing capability to accomplish complex analysis of large amounts of data. All of these achievements are the result of a focused effort to modernize the district office. The Roseburg District's goal is to continue to place appropriate technology and training in the hands of employees and decision makers to increase efficiency and effectiveness.

Geographic Information System - The BLM in western Oregon made a substantial investment in building a geographic information system (GIS) as it developed the resource management plans (RMPs). This information system has allowed the BLM to organize and standardize basic resource data across the western Oregon districts.. The GIS has now become a day to day tool in resource management that allows us to display and analyze complex resource issues in a fast and efficient manner. In support of the third year evaluation, district GIS efforts have been focused on data and analysis to compare the RMP assumptions with the initial years of plan implementation. BLM is now actively updating and enhancing the resource data as conditions change and further field information is gathered. The GIS plays a fundamental role in ecosystem management which allows the BLM to track constantly changing conditions, analyze complex resource relationships, and take an organized approach for managing resource data.

Cadastral Survey

Cadastral survey crews perform an essential function in the accomplishment of resource management objectives. In addition to the normal survey work of locating or establishing property lines and corners, the cadastrals provide technical assistance in geographic positioning system (GPS) for special status species mapping, stream location, and other resource programs on the Roseburg District.

Table 22. Roseburg District Cadastral Survey Activity

	Fiscal Year 1996	Fiscal Year 1997	Fiscal Year 1998
Projects Completed	7	10	13
Cadastral Projects	7	7	7
Miles of Survey Line Run	35.7	35	30.5
Monuments Set	38	58	78

Law Enforcement

Roseburg District has a full time BLM Ranger along with the services of a Douglas County Deputy Sheriff (through a law enforcement agreement with Douglas County) for law enforcement duties. Law enforcement efforts on the Roseburg District for fiscal year 1996 included participating in operations at Roseburg, Salem and Medford Districts during active protests and other demonstrations having the potential for confrontation, destruction of government property, or threatened employee or public safety, investigating occupancy trespass cases, assistance to the United States Attorney's Office with legal issues involved in searching BLM lands in the Roseburg District for a homicide victim, coordination with various state, local and federal agencies on the exchange of information concerning illegal or planned illegal activities on BLM lands, along with regular patrols and other ongoing investigations. Cases and incidents have resulted in written warnings, citations, physical arrests, and the referral of cases to other agencies. In addition, through the BLM Ranger and Deputy Sheriff, the Roseburg District has been able educate the public concerning appropriate uses of public lands and resources as well as preventing or avoiding potentially unlawful or harmful incidents and activities.

National Environmental Policy Act Analysis and Documentation

NEPA documentation

The review of the environmental effects of a proposed management action can occur in any of four ways: categorical exclusions, administrative determinations, environmental assessments, or environmental impact statements.

A categorical exclusion is used when it has been determined that some types of proposed activities do not individually or cumulatively have significant environmental effects and may be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

An administrative determination is a determination by BLM that NEPA documentation previously prepared by the BLM fully covers a proposed action and no additional analysis is needed. This procedure is often used in conjunction with a plan conformance determination. If an action is fully in conformance with actions specifically described in the RMP and analyzed in the RMP/FEIS, a plan conformance determination may be made and no additional analysis would be needed.

An environmental assessment (EA) is prepared to assess the effects of actions that are not exempt from NEPA, are not categorically excluded, and are not covered by an existing environmental document. An EA is prepared to determine if a proposed action or alternative will significantly affect the quality of the human environment.

Major proposals that will significantly affect the environment, and that have not been previously analyzed through an environmental impact statement (EIS) require that an EIS be prepared.

Roseburg District Environmental Documentation, Fiscal Year 1996-1998

During fiscal years 1996-1998, the Roseburg District completed approximately 50 environmental assessments, 275 categorical exclusions, seven NEPA or Plan conformance determinations and no environmental impact statements. The environmental assessments vary in complexity, detail and length depending on the project involved.

Protest and Appeals

Almost all Roseburg District timber sale environmental assessment decision records have been protested and appealed since the expiration of the Recission Act at the end of December 1996. Protest and appeal issues have challenged compliance with the RMP ROD, compliance with NEPA, analyses, assumptions and conclusions. With two exceptions, protests and appeals have been received by a single local environmental organization.

Recurring issues raised in the protests and appeals include: EA is insufficient, an EIS is needed, fail to follow recommendations of watershed analysis, improperly determine riparian reserve widths, not maintaining or restoring degraded watersheds, snags and coarse woody debris, failure to implement Survey and Manage protocol, unstable soils (clumping of retention trees illegal, should give riparian reserve status), road building.

The staff work involved in responding to protest and appeals on the Roseburg District represent a significant workload.

Plan Maintenance

The Roseburg Resource Management Plan Record of Decision was approved in June 1995. Since that time, the Roseburg District has begun implementation of the plan across the entire spectrum of resources and land use allocations. As the plan is implemented it sometimes becomes necessary to make minor changes, refinements or clarifications of the plan. Potential minor changes, refinements or clarifications in the plan may take the form of maintenance actions. Maintenance actions respond to minor data changes and incorporation of activity plans. This maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Plan maintenance will not result in expansion of the scope of resource uses or restrictions or change the terms, conditions and decisions of the approved resource management plan. Maintenance actions are not considered a plan amendment and do not require the formal public involvement and interagency coordination process undertaken for plan amendments. Important plan maintenance will be documented in the Roseburg District Planning Update and Roseburg District Annual Program Summary. Examples of possible plan maintenance issues that would involve clarification may include the level of accuracy of measurements needed to establish riparian reserve widths, measurement of coarse woody debris, etc. Much of this type of clarification or refinement involves issues that have been examined by the Regional Ecosystem Office and contained in subsequent instruction memos from the BLM Oregon State Office. Depending on the issue, not all plan maintenance issues will necessarily be reviewed and coordinated with the Regional Ecosystem Office or Provincial Advisory Committee. Plan maintenance is also described in the Roseburg District Resource Management Plan Record of Decision, page 79.

Previous plan maintenance was published in the 1996 and the 1997 Roseburg District Annual Program Summary. The following additional items have been implemented on the Roseburg District as part of plan maintenance during fiscal year 1998. These are condensed descriptions of the plan maintenance items and do not include all of the detailed information contained in the referenced instruction or information memos. Complete and detailed descriptions are available at the Roseburg District Office by contacting Phil Hall at 440-4931 ext. 242. These plan maintenance items represent minor changes, refinements or clarifications that do not result in the expansion of the scope of resource uses or

restrictions or change the terms, conditions and decisions of the approved resource management plan.

Plan Maintenance for fiscal year 1996:

1. Refinement of management direction pertaining to riparian reserves.

Standard of accuracy for measuring riparian reserve widths.(NFP Record of Decision pg B-13, Roseburg RMP Record of Decision pg 23)

As reviewed by the Regional Ecosystem and Research, and Monitoring Committee; a reasonable standard of accuracy for measuring riparian reserve widths in the field for management activities is plus or minus 20 feet or plus or minus 10% of the calculated width.

2. Refinement of management direction pertaining to riparian reserves.

Determining site-potential tree height for riparian reserve widths. NFP Record of Decision page C-31, Roseburg RMP Record of Decision pg 24)

According to the NFP Record of Decision, and the Roseburg District Resource Management Plan Record of Decision, "site potential tree height is the average maximum height of the tallest dominant trees (200 years or older) for a given site class." As reviewed by the Regional Ecosystem Office and as set forth by Instruction Memo OR-95-075, the Roseburg District will determine site-potential tree height for the purpose of establishing riparian reserve widths by the following steps:

- *Determine the naturally adapted tree species which is capable of achieving the greatest height within the fifth field watershed and/or stream reach in question;

- *Determine the height and age of dominant trees through on-site measurement or from inventory data (Continuous Forest Inventory Plots;

- *Average the site index information across the watershed using inventory plots, or well-distributed site index data, or riparian-specific derived data where index values have a large variation;

- *Select the appropriate site index curve;

Use Table 1 (included in Instruction Memo OR-95-075) to determine the maximum tree height potential which equates to the prescribed riparian reserve widths.

Additional detail concerning site potential tree height determination is contained in the above referenced instruction memo. Generally, the site potential tree heights used on the Roseburg District are usually in the vicinity of 160 to 200 feet.

3. Minor change and refinement of management direction pertaining to coarse woody debris in the matrix.

Coarse woody debris requirements.(NFP Record of Decision pg C-40, Roseburg RMP Record of Decision pg 34, 38, 65)

As recommended by the Research and Monitoring Committee and as reviewed and forwarded by the Regional Ecosystem Office, the Roseburg District will use the following guidelines in meeting the coarse woody debris requirements (leave 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long) in the General Forest Management Area and Connectivity/Diversity Blocks.

*In determining compliance with the linear feet requirements for coarse woody debris, the Roseburg District will use the measurement of the average per acre over the entire cutting unit, or total across the unit.

*log diameter requirements for coarse woody debris will be met by measuring logs at the large end.

*interdisciplinary teams will establish minimum coarse woody debris requirements on each acre to reflect availability of coarse woody debris and site conditions.

*During partial harvests early in rotational cycle, it is not necessary to fall the larger dominant or codominant trees to provide coarse woody debris logs.

*Count decay class 1 and 2 tree sections greater than or equal to 30 inches in diameter on the large end that are between 6 feet and 16 feet in length toward the 120 linear feet requirement

In addition, the coarse woody debris requirements have been further refined in cooperation with the Southwest Oregon Province Advisory Committee, a diverse group of land managers and interest groups with representation from federal land management and regulatory agencies, state and local government, timber industry, recreation, environmental, conservation, fishing, mining, forest products, grazing, and tribal interests. After this refinement has been implemented for one year, the Province Advisory Committee will evaluate the results.

This process for determining coarse woody debris requirements, which is described in seven steps, is anticipated to be a very simple process that an interdisciplinary team will follow when planning projects that may impact levels of coarse woody debris. New prescriptions will be only for the project being planned.

4. Minor change in management direction pertaining to lynx.

Change in specific provisions regarding the management of lynx. (NFP Record of Decision pages C-5, C-45, C-47 C-48; Roseburg RMP Record of Decision pages 45,46,47)

This documents an Oregon State Director decision to implement through plan maintenance of the western Oregon BLM resource Management Plans a Regional Interagency Executive Committee decision .

This refinement of lynx management consists of the changing the survey and manage lynx requirements from survey prior to ground disturbing activities to extensive surveys. Implementation schedule is

changed from surveys to be completed prior to ground disturbing activities that will be implemented in fiscal year 1999 to surveys must be under way by 1996. Protection buffer requirements for lynx are unchanged.

These changes simply resolve an internal conflict within the Northwest Forest Plan Record of Decision and Roseburg Resource Management Plan.

5. Minor change in standards and guidelines for *Buxbaumia piperi*

On July 26, 1996, the Oregon State Director issue a minor change in the standards and guidelines or management action direction in the RMP for *Buxbaumia piperi* (a species of moss) through plan maintenance. The State Director's action "maintained" the Roseburg, Salem, Eugene, Medford, and Klamath Falls Resource Management Plans. Simultaneously, the Forest Service issued Forest Plan corrections for 13 National Forests in the Northwest to accomplish the same changes.

This plan maintenance action removes *B. piperi* as Protection Buffer species. This change corrects an error in which mitigation measures described on page C-27 of the Northwest Forest Plan Record of Decision and on page 44 of the Roseburg District Resource Management Plan Record of Decision were incorrectly applied to *B. Piperi*.

B. piperi was addressed in the Scientific Analysis Team (SAT) report published in 1993. The Northwest Forest Plan Record of Decision included some Protection Buffer species sections from the SAT report. The SAT Protection Buffer species status was developed to improve the viability of species considered at risk. Although *B. piperi* is not rare, it was apparently carried forward as a Protection Buffer species because it was rated with a group of rare mosses that occupy similar habitat.

This plan maintenance is supported by staff work and information from the Survey and Manage Core Team, and the expert panel of Pacific Northwest specialists on bryophytes, lichens and fungi that participated in the Scientific Analysis Team process.

6. Minor change/correction concerning mountain hemlock dwarf mistletoe

Appendix H-1 of the Roseburg RMP Record of Decision indicated that *Aruethobium tsugense* was to be managed under survey strategies 1 and 2. The Regional Ecosystem Office later determined mountain hemlock dwarf mistletoe to be common and well distributed in Oregon, and recommended that *Aruethobium tsugense* subsp. *Mertensianae* be managed as a survey strategy 4 species in Washington only. This information was received in OSO Information Bulletin OR-95-443 is adopted as RMP clarification.

Plan Maintenance for fiscal year 1997:

1. Correction of typographical errors concerning understory and forest gap herbivore arthropods.

Appendix H, Table H-1, page 186 of the Roseburg RMP Record of Decision: "Anthropods" is changed to "Arthropods". "Understory and forest gap herbivores" is changed to "Understory and forest gap hebivores (south range). Information from Oregon State Office Information Bulletin OR-

97-045.

2. Clarification of implementation date requirement for Survey and Manage component 2 surveys.

The S&G on page C-5 of the NFP ROD states “implemented in 1997 or later”, the NFP ROD, page 36 states “implemented in FY 1997 or later”. In this case where there is a conflict between specified fiscal year (ROD-36) and calendar year (S&G C-5) the more specific fiscal year date will be used over the non-specific S&G language. Using fiscal year is the more conservative approach and corresponds to the fiscal year cycle used in project planning and, also, to the subsequent reference to surveys to be implemented prior to fiscal year 1999. Information from Oregon State Office Instruction Memorandum OR-97-007.

3. Clarification of what constitutes ground disturbing activities for Survey and Manage component 2.

Activities with disturbances having a likely “significant” negative impact on the species habitat, its life cycle, microclimate, or life support requirements should be surveyed and assessed per protocol and are included within the definition of “ground disturbing activity”.

The responsible official should seek the recommendation of specialists to help judge the need for a survey based on site-by-site information. The need for a survey should be determined by the line officer’s consideration of both the probability of the species being present on the project site and the probability that the project would cause a significant negative affect on its habitat. Information from Oregon State Office Instruction Memo OR-97-007.

4. Clarification when a project is implemented in context of component 2 Survey and Manage.

S&G C-5 of NFP ROD and Management Action/Direction 2.c., page 22 of the RMP ROD states that “surveys must precede the design of activities that will be implemented in [FY] 1997 or later.” The interagency interpretation is that the “NEPA decision equals implemented” in context of component 2 species survey requirements. Projects with NEPA decisions to be signed before June 1, 1997 have transition rules that are described in IM OR-97-007. Information from Oregon State Office Instruction Memorandum OR-97-007.

5. Conversion to Cubic Measurement System.

Beginning in fiscal year 1998 (October 1997 sales), all timber sales (negotiated and advertised) will be measured and sold based upon cubic measurement rules. All timber sales will be sold based upon volume of hundred cubic feet (CCF). The Roseburg District RMP ROD declared an allowable harvest level of 7.0 million cubic feet. Information from Oregon State Office Instruction Memorandum OR-97-045.

6. Clarification of retention of coarse woody debris.

The NFP ROD S&G, pg C-40 concerning retention of existing coarse woody debris states: “Coarse Woody Debris already on the ground should be retained and protected to the greatest extent possible. . . . The phrase “to the greatest extent possible” recognizes felling, yarding, slash treatments, and forest

canopy openings will disturb coarse woody debris substrate and their dependant organisms. These disturbances should not cause substrates to be removed from the logging area nor should they curtail treetements. Reservation of existing decay class 1 and 2 logs, in these instances, is at the discretion of the district. Removal of excess decay class 1 and 2 logs is contingent upon evidence of appropriately retained or provided amounts of decay class 1 and 2 logs.

Four scenarios are recommended to provide the decay class 1 and 2 material by using standing trees for coarse woody debris:

Scenario 1. Blowdown commonly occurs and wind normally fells retention trees, providing both snags and coarse woody debris immediately following regeneration harvest. After two winter seasons, wind firm trees may still be standing; top snap occurs providing both snags and coarse woody debris; and blowdowns include total tree length, often with the root wad attached. A third year assessment would monitor for coarse woody debris and determine if the need exists to fell trees to meet the required linear feet.

Scenario 2. In small diameter regeneration harvest stands, the largest sized green trees are selected as coarse woody debris and felled following harvest. The alternative is to allow these trees to remain standing and potentially to grow into larger sized diameter coarse woody debris substrate after a reasonable period of time.

Scenario 3. The strategy is to meet the decay class 1 and 2 log level required post-harvest immediately following logging or the site preparation treatment period. This strategy assumes that an adequate number of reserve trees are retained to meet the requirement. Upon completion of harvest, the existing linear feet of decay class 1 and 2 logs for each sale unit are tallied; and then the reserve trees are felled to meet the 120 feet linear foot requirement. Knockdowns, trees felled to alleviate a logging concern, and blowdowns are counted toward the total linear feet so long as they meet the decay class, diameter, and length requirements. The minimum amount of coarse woody debris linear feet are ensured, and excess trees continue to grow.

Scenario 4. Provide the full requirement of coarse woody debris in reserve trees. There is no need to measure linear feet since the decay class 1 and 2 requirements will be met from the standing, reserved trees. Accept whatever linear feet of decay class 1 and 2 logs is present on the unit post-harvest. The management action will be to allow natural forces (primarily windthrow) to provide infusions of trees into coarse woody debris decay classes 1 and 2 over time from the population of marked retention trees and snag replacement trees.

Large diameter logs which are a result of felling breakage during logging but are less than 16 feet long may be counted towards the linear requirement when:

- *the large end diameters are greater than 30 inches and log length is greater than 10 feet
- *log diameters are in excess of 16 inches and volume is in excess of 25 cubic feet.
- *they are the largest material available for that site.

The above information for clarification of coarse woody debris requirements is from Oregon State Office Instruction Memo OR-95--28, Change 1, and Information Bulletin OR-97-064.

7. Clarification of insignificant growth loss effect on soils.

Management action/direction contained in the RMP ROD pp 37 and 62 states that “In forest management activities involving ground based systems, tractor skid trails including existing skid trails, will be planned to have insignificant growth loss effect. This management action/direction was not intended to preclude operations in areas where previous management impacts are of such an extent that impacts are unable to be mitigated to the insignificant (less than 1%) level. In these cases, restoration and mitigation will be implemented as described in the RMP ROD management action/direction and best management practices such that growth loss effect is reduced to the extent practicable.

Plan maintenance for fiscal year 1998

1. Guidance on implementation of the 15% retention standard and guideline which provides for retention of late-successional forests in watersheds where little remains. A joint BLM-FS guidance which incorporated the federal executives’ agreement was issued on September 14, 1998, as BLM Instruction Memorandum No. OR-98-100. This memo clarifies and refines the standard and guideline contained in the Northwest Forest Plan and RMP that directs that in fifth field watersheds in which federal forest lands are currently comprised of 15% or less late-successional forest should be managed to retain late-successional patches. The memo emphasizes terminology and intent related to the standard and guideline, provides methods for completing the assessment for each fifth field watershed, dictates certain minimum documentation requirements and establishes effective dates for implementation. Instruction Memo OR-98-100 is adopted in its entirety as RMP clarification and refinement.
2. Management Action/Direction for Visual Resources has been found to be unclear due to internal inconsistency. The Roseburg RMP includes management action/direction in addition to that which is common to all other western Oregon BLM districts. The prescriptive management action/direction unique to the Roseburg District RMP has been found too difficult to implement in a logical and consistent manner. The management action/direction for visual resources is refined by the deletion of five paragraphs that discuss harvest scenarios on page 53 of the RMP/ROD. This refinement does not result in the expansion of the scope of resource uses and allows the Roseburg District RMP/ROD to be consistent with other western Oregon BLM RMP/RODs.

ROSEBURG DISTRICT RESOURCE MANAGEMENT PLAN MONITORING

FISCAL YEAR 1998

Monitoring Report

Fiscal Year 1997

Executive Summary

Introduction

This document represents the third monitoring report of the Roseburg District Resource Management Plan for which the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring of the third full fiscal year of implementation of the Resource Management Plan, fiscal year 1998. This report does not include the monitoring conducted by the Roseburg District which is identified in activity or project plans. Monitoring at multiple levels and scales along with coordination with other BLM and Forest Service units has been initiated through the Regional Interagency Executive Committee (RIEC).

The Resource Management Plan monitoring effort for Fiscal Year 1998 addressed the 50 implementation questions relating to the 20 land use allocations and resource programs contained in the Monitoring Plan. There are 51 effectiveness and validation questions included in the Monitoring Plan. The effectiveness and validation questions were not required to be addressed because some time is required to elapse after management actions are implemented in order to evaluate results that would provide answers.

Findings

Monitoring results found full compliance with management action/direction in 19 of the 20 land use allocations and resource programs identified for monitoring in the plan. Monitoring results also found full compliance in 49 of the 50 implementation monitoring questions contained in the plan.

One key question relating to Riparian Reserves found one discrepancy with management action/direction. Although not constituting non-compliance, results from two other key questions found differences in some fiscal year 1998 activities and outputs compared to projected annual averages.

In the case of the one Riparian Reserve question discrepancy, the overall average width of the riparian reserve was adequate and the effects of the shortfall were not significant. Overall, analysis of the discrepancy and differences did not indicate adverse affects to resources or programs or the need for management or program adjustment.

Recommendations

No implementation or management adjustments are recommended as Fiscal Year 1998 monitoring results indicate very high compliance with management action/direction.

Conclusions

Analysis of the Fiscal Year 1998 monitoring results concludes that the Roseburg District had almost 100% compliance with management action/direction, and therefore no major changes in management direction or Resource Management Plan implementation is warranted at this time. The results indicate a continuing conscientious implementation of the plan by informed and knowledgeable staff and managers.

Monitoring Fiscal Year 1999

Introduction

This document represents the third monitoring report of the Roseburg District Resource Management Plan for which the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring of the third full fiscal year of implementation of the Resource Management Plan. Included in this report are the projects that took place from October 1997 until September 1998. Effectiveness and validation monitoring will be conducted in subsequent years when projects mature or proceed long enough for the questions asked under these categories of monitoring to be answered. The term "management action/direction" discussed in the Resource Management Plan and this monitoring report is approximately equivalent to the term "standards and guidelines" used in the Record of Decision for the Northwest Forest Plan.

Background

The BLM planning regulations (43 CFR 1610.4-9) call for the monitoring and evaluation of resource management plans at appropriate intervals.

Monitoring is an essential component of natural resource management because it provides information on the relative success of management strategies. The implementation of the RMP is being monitored to ensure that management actions: follow prescribed management direction (implementation monitoring), meet desired objectives (effectiveness monitoring), and are based on accurate assumptions (validation monitoring)(see Appendix I, Record of Decision and Resource Management Plan). Some effectiveness and most validation monitoring will be accomplished by formal research. The nature of the questions concerning effectiveness monitoring require some maturation of implemented projects in order to discern results. This and validation monitoring will be conducted as appropriate in subsequent years.

The monitoring process usually collects information on a sample basis. Monitoring could be so costly as to be prohibitive if not carefully and reasonably designed. Therefore, it is not necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs are avoided by focusing on key monitoring questions and sampling procedures. The level and intensity of monitoring varies, depending on the sensitivity of the resource or area and the scope of the management activity.

Monitoring Overview

This monitoring report focuses on the 50 implementation monitoring questions contained in the Resource Management Plan. This report does not include the monitoring conducted by the Roseburg District identified in activity or project plans. The monitoring plan for the Resource Management Plan incorporates the Monitoring and Evaluation Plan for the Record of Decision for the Northwest Forest Plan.

Monitoring at multiple levels and scales along with coordination with other BLM and Forest Service units has been initiated through the Regional Interagency Executive Committee (RIEC). At the request of the Regional Interagency Executive Committee, the Regional Ecosystem Office (REO) has implemented a regional-scale Implementation Monitoring Program.

The monitoring process is intended to be an iterative, adaptive process where we learn by doing. As results are evaluated, the process is expected to be adjusted as needed. Changes may be made in the monitoring process itself to increase clarity, efficiency, and usefulness of monitoring. Other adjustments may be made in district processes and procedures to increase our success in achieving implementation objectives.

The goal of management is to have very high compliance with all management action/direction or all standards and guidelines. Failure to achieve 100 percent compliance will result in the evaluation aspect of adaptive management to determine if adjustments are necessary to correct deficiencies.

Monitoring Process and Approach

Each Resource Area is responsible for the collection, compilation, and analysis of much of the data gained through monitoring activities. Resource Areas must report their findings and recommendations to the District for consolidation and publication in the Annual Program Summary.

The RMP Monitoring Plan consists of key questions for implementation, and effectiveness and validation monitoring relating to the various land use allocations and resource programs. The key questions are applied through monitoring requirements identified in the Monitoring Plan. Monitoring requirements describe appropriate sampling levels and how the key questions will be answered.

Although some monitoring requirements indicate that the information for some key questions will be found in the Annual Program Summary, this document has been designed to stand alone and all answers and information are provided in this report. When combined with the Annual Program Summary, there is some repetition of information.

The Resource Management Plan directs that the Annual Program Summary will track the progress of plan implementation, state the findings made through monitoring, specifically address the implementation monitoring questions posed in each section of the Monitoring Plan and serve as a report to the public. The Resource Management Plan monitoring effort for Fiscal Year 1998 addressed the 50 implementation questions relating to the 20 land use allocations and resource programs contained in the Monitoring Plan.

There are 51 effectiveness and validation questions included in the Monitoring Plan. These questions generally require some time to elapse after management actions are implemented in order to evaluate results that would provide answers. Examples of effectiveness and validation questions in the Monitoring Plan are: "Is the forest ecosystem functioning as a productive and sustainable ecological unit?", "Is the health of the Riparian Reserve improving?", "Are stands growing at a rate that will produce the predicted yields?", "What are the effects of management on species richness (numbers and diversity)?" These kinds of questions are mostly not able to be addressed in the first years of plan implementation. Effectiveness and validation monitoring status, progress and results will be reported in

subsequent year monitoring reports as appropriate.

Monitoring Results and Findings

The results of answering the implementation questions in the Monitoring Plan are not easily characterized. Some questions may be answered in a yes or no manner. Some questions because of lack of activity in a particular aspect of a resource program may not be applicable. Many questions ask for a brief status report of an activity. The status-type of questions often lack thresholds of acceptable activity. Examples of this type of question are: "What is the status of designing and implementing wildlife restoration projects?", "What is the status of the preparation of assessment and fire plans for the Late-Successional Reserves?".

Although the nature of the monitoring questions makes any meaningful statistical summary difficult, some generalizations and highlights may be made.

There were found to be one discrepancy in the 50 implementation monitoring questions contained in the plan. Not all discrepancies equated to non-compliance with management action/direction; only one question found an instance of non-compliance. Activities in 19 of 20 land use allocations and resource programs identified for monitoring in the plan were found to be in full compliance with management action/direction. These generalizations require a more in depth examination of the implementation monitoring questions and monitoring results in order to be fully understood.

Discussion of Discrepancies

Riparian Reserves

There was one key question, where on-the-ground application did not comply with management action/direction.

The key question in which an instance of non-compliance was noted is question number two of the Riparian Reserve key questions: "Is the width and integrity of the Riparian Reserves being maintained?". For this question, 18 units within three timber sales were sampled. Of the total of 18 units sampled, the Riparian Reserve width of unit two of the Christopher Folly timber sale was found to be posted at an average 151 feet versus the required 160 feet for a non-fish bearing stream. Although this width is within the 10% accuracy established in the RMP through plan maintenance, there was one area in which the measured distance of the riparian reserve width was only 50 feet. The non-fish bearing stream in question is located within an existing young forest plantation approximately 50 feet from the marked unit boundary. This shortfall resulted because the stream in this dense plantation had no visible indicators of water movement from the nearby road during the summer months when the field work was completed for the unit. The field crew did not have an indication to explore this dense plantation to look for an intermittent stream. Because of the total riparian reserve width averages for non-fish bearing streams, the environmental effects of this one narrowed reserve is not considered to be significant.

Timber Resources

In two questions having to do with timber resources, Fiscal Year 1998 activities and outputs differed from average annual projections. Except for the Roseburg declared Allowable Sale Quantity, projections are not intended as management action/direction requiring strict conformance. Projected levels of activities are the approximate level expected to support the Allowable Sale Quantity. Annual or periodic differences between projected and actual levels of activities will be examined during third year evaluation to determine if the goals and objectives outlined for timber resources are being or are likely to be met.

Timber Resource key monitoring question number one is: "By land use allocation, how do timber sale volumes, harvested acres, and the age and type of regeneration harvest stands compare to projections in the SEIS Record of Decision, Standards and Guidelines and RMP management objectives?".

Discrepancies in this question involved the following:

	<u>Fiscal Year 1998</u>	<u>Projected</u>	<u>Diff</u>
Total Timber Sale Vol:	44.5 MMBF	49.5 MMBF	-11%
Matrix Timber Sale Vol:	37.8 MMBF	45.0 MMBF	-16%
Other wood	6.7 MMBF	4.5 MMBF	+48%
Key Watershed TS Vol:	19.1 MMBF	8.3 MMBF	+230%
Total Regen Harvest	802 acres	1190 acres	-67%
Total Comm Thinning	536 acres	84 acres	+638%
Total Density Mgt	483 acres	66 acres	+732%

The differences between Fiscal Year 1998 timber volumes and the projected average annual rates does not constitute non-compliance with management action direction. Management action/direction for timber resources states: "During the first several years, the annual allowable sale quantity will not likely be offered for sale. The Resource Management Plan represents a new forest management strategy. Time will be required to develop new timber sales that conform to the Resource Management Plan."

The shortfall between Fiscal Year 1998 and projected regeneration harvest acres is in approximate proportion to the volume differences discussed above.

The differences in fiscal year 1998 and projected commercial thinning and density management may be attributable to two factors. The first factor is that the interdisciplinary teams have in these initial years of implementation found that thinning and density management projects are less complex and relatively easier to implement than regeneration harvests. A second factor may be that the "operability" of available acres to commercial thin or density manage may have been underestimated. This factor will continue to be tracked and addressed in the district's third year evaluation.

Timber Resource key monitoring question number two is: "Were the silvicultural (eg., planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity, implemented?". Discrepancies in this question involved the following:

	Fiscal Year 1998	Projected
Brushfield/hardwood conversion	0 acres	15 acres
Site Preparation, prescribed fire	149 acres	840 acres
Site Preparation, other	0 acres	50 acres
Planting, regular stock	1183 acres	290 acres
Planting, genetic stock	157 acres	1140 acres
Stand maintenance/protection	1350 acres	830 acres
Stand release/precommercial thin	4305 acres	3900 acres
Pruning	957 acres	460 acres
Fertilization	1060 acres	1140 acres

The projected figures are an annual average for the first decade of the plan and as such the actual annual level of activity would vary from year to year.

The discrepancy between projected site preparation prescribed fire acres and the actual accomplishment in Fiscal Year 1998 largely represents available acres which vary with recent timber sale harvest activity. No adjustment of the site preparation program is indicated.

The planting of regular stock and the planting of genetic stock discrepancy is based on the start-up time lag at seed orchards in producing available genetic seed and seedlings. This situation is expected to be corrected in a few years. Since the planting of genetic stock has not contributed to the allowable sale quantity calculated for this decade, there is no program or resource effect resulting from this discrepancy.

None of the discrepancies between projected levels of activity and the fiscal year 1998 levels indicate the need for program adjustment. Activity levels compared to projections will be further analyzed as part of the third year evaluation.

Recommendations

Implementation and Management

As a result of observed very high compliance with management action/direction in the fiscal year 1998 monitoring, no implementation or management adjustments are recommended. The initial analysis of monitoring findings that indicated discrepancies revealed no discernable trend or significant resource or program implications. Through the adaptive management use of the information derived from monitoring, the implementation of the Roseburg District RMP is expected to remain at a high level of compliance. There are no recommendations for changes in the management action/direction, land use allocations or objectives of the RMP as a result of the 1998 monitoring results. Additional analysis will be made of the cumulative monitoring and program summary information from June 1995 through September 1998 during the third year evaluation to determine if adjustments to the RMP might be necessary.

Clarification of Management Action/Direction

The Resource Area monitoring submissions in previous years to the District indicated difficulties in interpreting the management action/direction and monitoring questions. Through adaptive management, clarification and refinement of the Roseburg District RMP and Monitoring Plan was made and as a result the difficulties related to interpretation of the plan have been reduced significantly. Additional clarification and refinement will be made as needs are identified.

Conclusions

Of the hundreds of discrete actions that were reviewed through the 50 implementation monitoring questions, only a one on-the-ground discrepancy was found. In the context of implementing many projects through complex management direction and complex environmental conditions, the single discrepancy identified through monitoring does not warrant changes to the Resource Management Plan. Discrepancies in some of the fiscal year 1998 activity and output levels compared to the average annual projections were either insignificant, within the range of variation provided by management action/direction, and/or had no immediate consequence requiring resource or program adjustment.

Analysis of the Fiscal Year 1998 monitoring results concludes that the Roseburg District had almost 100% compliance with management action/direction, and therefore no major changes in management direction or Resource Management Plan implementation is warranted at this time. The results indicate a remarkably successful implementation of the plan by very conscientious and knowledgeable staff and managers.

Resource Management Plan Monitoring Report

All Land Use Allocations

Expected Future Conditions and Outputs

Protection of SEIS special attention species so as not to elevate their status to any higher level of concern.

Implementation Monitoring

Monitoring Question 1:

Is the management action for the four components of species listed in Appendix H, Table H-1 (Survey and Manage) being implemented as required?

Monitoring Requirement:

At least 20 percent of all management actions will be examined prior to project initiation and reexamined following project completion.

Monitoring Performed:

Class of 98 timber sale (sold-unawarded). Follow-up monitoring on Dream Weaver timber sale (sold-unawarded) and Smoke Signal timber sale (awarded). Happy Summit Density Management

Findings:

Class of 98 timber sale

Animals:

An area-wide analysis was conducted of suitable habitat for the red tree vole (*Arborimus longicaudus*) as described in the official survey protocol. As defined in that document, none of the basins in the South River Resource Area require surveys based on the current extent of suitable habitat available. No clearance surveys were done for this species in this sale, but two red tree vole sites were found in unit 2 (unit B in the EA) during the environmental assessment.

All special status mollusks are component 1 and 2 species on the Table H-1 list. This sale, being implemented prior to Fiscal Year 1999, does not require clearance surveys as described for component 2 species. A site was found for the papillose tailed dropper (*Prophysaon dubium*) in unit 2 (unit B in the EA) during the environmental assessment, and thus required protection as a known site.

Recommendations from the area biologist were to maintain microsite conditions for the papillose tailed dropper by buffering the site by one site potential tree radius from harvest or ground disturbance. Recommendations to protect the red tree vole sites included maintaining an undisturbed site that contained the nest sites and remained connected to the nearby riparian area. This buffering option followed option b in the red tree vole management guides (Interim Guidance for Survey and Manage Component 2 Species: The Red Tree Vole, BLM-IM:OR-97-009)

Measurements of these buffers in the field showed that the red tree vole buffer, the tailed dropper buffer, and one plant protection buffer were all measured and marked following protection guides. Because these three protection areas were near each other, the common boundaries were connected. The result was a large protection area that also included a retention tree island. This approach simplified protection of the known C-3 sites and facilitated harvest by eliminating any need to harvest between narrow and hard to reach areas between the protection buffers.

Most of this sale was outside the known range and 25 mile buffer zone of the Del Norte salamander based on the known sites in 1996-1997. Units A and B were inside this buffer zone. These units did not have suitable habitat and so did not require surveys for this species.

Plants:

(Component 1 & 2) One Survey and Manage Component 1& 2 vascular plant (*Aster vialis*) was observed in the project area. The unit boundary was adjusted during project design to protect the population and habitat from the timber sale. (Components 3 & 4) Standardized protocols are still being developed. Surveys were not required and were not done on this sale.

Although the botanical review for the Happy Summit Density Management states in Table 1 that surveys for Protection Buffer (PB) species are required for 1997 projects BLM-Instruction Memorandum No. OR-98-099 notes: *Each management action for which a “NEPA decision” or “decision document” is signed or the BLM forest management activity (e.g. timber sale) “Notice of Decision” is first published prior to October 1, 1998 - No surveys are required for the Component 2 “FY 1999 species” and Protection Buffer species shown on Attachment 1. Therefore the surveys completed for Buxbaumia viridis exceeded survey requirements. No B.viridis or other PB species was observed during surveys.*

The EA addresses several special status species: red tree vole, blue-grey tail-dropper. Surveys were conducted in the area for molluscs; surveys for red tree voles were not required because habitat thresholds were met. A blue-grey tail-dropper was located adjacent to one sale unit.

Follow-up Monitoring

Status of the Dream Weaver timber sale remains sold-unawarded. Smoke Signal timber sale has been awarded, but no operations have occurred. Follow-up monitoring is pending on these sales.

Conclusions:

Required management action for the four components of species listed in Appendix H, Table H-1 (Survey and Manage) is being implemented.

Comment/Discussion:

None

Monitoring Question 2:

Is the management action for the species listed in Appendix H, Table H-2 (Protection Buffer) being implemented as required?

Monitoring Requirement:

At least 20 percent of all management actions will be examined prior to project initiation and reexamine following project completion.

Monitoring Performed:

Class of 98 timber sale (sold-unawarded). Follow-up monitoring on Final Curtin timber sale (sold-unawarded) and Smoke Signal timber sale (awarded).

Findings:***Class of 98 timber sale***

Animals: The Great Grey Owl (*Strix nebulosa*) and the Del Norte salamander (*Plethodon elongatus*) are the only protection buffer wildlife species known in the South River resource area. The Great Gray Owl protocol guides (1995) state that clearance is required if a project is located above 3,000 ft., within the range of the spotted owl, within mature stands, and within 1000 feet of a natural meadow larger than 10 acres. All units in this sale are below the 3,000 feet elevation zone and have early seral age class (0-15 years old) in the vicinity. The actual elevation for this project falls between 900-1500 feet in elevation. Clearance surveys for the Great Gray Owl were not done in this sale.

Most of this sale was outside the known range and 25 mile buffer zone of the Del Norte salamander based on the known sites in 1996-1997. Two units (A and B) were inside this buffer zone. These units did not have suitable habitat and so did not require surveys for this species.

Plants:

One Protection Buffer species was found in the project area (*Buxbaumia viridis* Moss). The unit boundary was adjusted during project design to protect the population and habitat from the timber sale.

Follow-up Monitoring

Final Curtin timber sale and Class of 98 timber sale remain sold-unawarded. No operations have occurred on Smoke Signal timber sale. Follow-up monitoring is pending.

Monitoring Performed:

Happy Summit Density Management

Findings:

No special status vascular plants or bryophytes were found during surveys. Six Survey and Manage fungi and one lichen were observed. *Helvella compressa*, a Component 1 & 3 fungus was found. *H.compressa* is a candidate to be removed from the Survey and Manage species list because it has been found in disturbed nonforest and forest habitat (Castellano & O'Dell, Sept 1997). Five other Survey and Manage fungi and a lichen were found (Component 3 or Component 3&4). No mitigation is required for these species.

There are no applicable terrestrial wildlife species.

Conclusions:

The required management action for the species listed in Appendix H, Table H-2 (Protection Buffer) is being implemented.

Comment/Discussion:

None

Riparian Reserves

Expected Future Conditions and Outputs

See Aquatic Conservation Strategy Objectives.

Provision of habitat for special status and SEIS special attention species.

Implementation Monitoring

Monitoring Question 1:

Are watershed analyses being completed before on-the-ground actions are initiated in Riparian Reserves?

Monitoring Requirement:

The files on each year's on-the-ground actions will be checked annually to ensure that watershed analyses were completed prior to project initiation.

Monitoring Performed:

Program review.

Findings:

Projects Having Activity <u>Within Riparian Reserves</u>	<u>Watershed</u>	<u>Status of W.A.</u>
Class of 98	Myrtle Creek	Completed January 1997
Sugar Pine Density Management	Deadman/Dompier	Completed April 1997
Happy Summit Density Management	Smith River	Completed June, 1995
Johnson Creek Commercial Thinning	Smith River	
Bell Mountain Regeneration Harvest & CT	Elkton-Umpqua River	Completed June, 1998

Conclusion:

RMP requirements were fully met.

Comment/Discussion:

None

Monitoring Question 2:

Is the width of the Riparian Reserves established according to RMP management direction?

Monitoring Requirement:

At least 20 percent of management activities within each resource area will be examined prior to project initiation and reexamined following project completion, to determine whether the width of the Riparian Reserves were maintained.

Monitoring Performed:

Class of '98 timber sale. Followup monitoring on High Noon timber sale unit no. 5. Followup monitoring is pending on the remaining High Noon units (operations not completed), Final Curtin timber sale (sold-unawarded), Smoke Signal timber sale (operations not started), and Dream Weaver timber sale (sold-unawarded).

Findings:

An accuracy of 10% for Riparian Reserve width is expected during the layout of the sale. Measurements were taken using a laser range finder. Some variation from previous reported measurements may result due to accuracy of string machines or logger tapes, used on previous year's monitoring. Transects were measured at 300 foot intervals.

Class of '98 timber sale

The Class of '98 Timber Sale includes five (5) units with Riparian Reserves either adjacent to or within the units. The site potential tree height for this area is 160 feet.

Unit #1	Measurement
	162
	143
	163
	196
	159
	170
	140
	176
	243*
	324*
	159
	203
	165
	162
	182
	194
Average	184 / 170**

* The Riparian Reserve was extended at this location for slope instability

** Average width of Riparian Reserve if the two measurements were not used where the Riparian Reserve was extended.

Unit #2	Measurement
	159
	151

	177
Average	162
Unit #3	Measurement
	138
	155
	194
	148
Average	159
Unit #5	Measurement
	165
	160
	164
Average	163
Unit #8	Measurement
	190
	111
	161
	161
	177
	165
	191
	164
Average	165

All of the units within the Class of '98 Timber Sale met the Riparian Reserve requirement of 160 feet (within 10% accuracy). Unit #1 exceeded this requirement because the Riparian Reserve was extended for slope instability in one area. If these measurements were not used, the average width of the Riparian Reserve in Unit #1 would have been 170 feet.

Followup Monitoring

High Noon timber sale

Unit 5 of the High Noon Timber Sale is the only unit where activity has been completed, that is adjacent to or contains a Riparian Reserve. The site potential tree height for this watershed has been determined to be 180 feet.

Unit # 5	Measurement
	212* / 209**
	186* / 183**
Average	199* / 196**

* Measurements before harvest

** Measurements after harvest

Conclusion:

Riparian Reserve widths have been established according to RMP management direction.

Comment/Discussion:

None.

Monitoring Performed:

The Christopher Folly Regeneration Harvest was monitored which represents 1 of 4 timber sales (25%) that had the potential for being chosen for implementation monitoring for FY98. This sale included 12 units.

Findings:

A comparison was made for consistency between the EA, timber sale contract and in the field, regarding riparian reserve widths. The site potential tree height for this watershed and sale area has been determined to be 160 feet. As required in the NWFP and RMP ROD, interim riparian reserve widths will be the following:

Intermittent and perennial non-fish bearing streams 160 feet

Perennial fish bearing streams 320 feet

The timber sale contract Exhibit A shows the riparian reserves as mapped on the ground and reflects the decisions in the EA. Section 40 of the contract reserves from cutting all timber in the reserve areas delineated in Exhibit A. Distance monitoring was conducted in the field to check riparian reserve widths. An accuracy of 10% is expected during layout of the sale. Measurements were taken using a string machine and logger's tape.

The table below summarizes Riparian Reserve measurements.

Christopher Folly Riparian Reserve Monitoring

Harvest Unit #	Transect	Measured Dist.(ft)	Required Width (ft)	Comments
1	1	170	160	
	2	145	160	
	3	187	160	
	4	160	160	
	5			Transect #5 measurement deleted from calculations ^a .
	6	155	160	
	7	168	160	
	8	250	160	
	9	160	160	
	10	180	160	
	11	230	160	
	12	156	160	
	13	155	160	
	14	160	160	
	15	130	160	
	Average	172	160	Ave. measured distance is +8% of required RR width.
2	1	158	160	
	2	182	160	Measured RR width >160' due to S&M plant site.
	3	193	160	Measured RR width >160' due to S&M plant site.
	4	172	160	
	5	50	160	Measured distance is -69% of required RR width.
	Average	151	160	Ave. measured distance is -5% of required RR width.

2	6	372	320	Fish Bearing Stream Measured distance is +16% of required RR width.
3	1	177	160	
2	252	160		Measured RR width >160' due to S&M plant site.
3	168	160		
4	139	160		
	Average	184	160	Ave. measured distance is +15% of required RR width.
4				No Riparian Reserves
5				No Riparian Reserves
6	1	158	160	
	2	160	160	
	3	270	160	
	4	160	160	
	5	152	160	
	Average	180	160	Ave. measured distance is +12% of required RR width.
7	1	175	160	Measured distance is +9% of required RR width.
	2	367	320	Fish Bearing Stream Measured distance is +15% of required RR width.
8	1	229	160	Measured distance is +43% of required RR width.
9	1	157	160	
	2	163	160	.
	3	168	160	
	4	168	160	
	5	147	160	
	6	160	160	
	7	172	160	
	8	166	160	
	9	163	160	
	10	180	160	
	11	190	160	
	Average	167	160	Ave. Measured distance is +4% of required RR width.
10	12	163	160	
	13	173	160	
	Average	168	160	Ave. measured distance is +4% of required RR width.
11				No Riparian Reserves
12	15	155	160	
	16	150	160	
	17	172	160	
	18	155	160	
	Average	158	160	Ave. measured distance is -1% of required RR width.
	TOTAL AVG.	176		For Non-Fish Bearing Streams Only Ave. measured distance is +10% of required RR width.

Note: Transects for units #9,10, and 12 are numbered consecutively.

^a Unit #1, Transect 5: This was a measured distance of 345 feet on the North side of the unit boundary. It was measured from the stream through a young tree plantation to the edge of the late successional forest that makes up the regeneration harvest unit boundary. The unit boundary is well beyond the 160 foot riparian reserve limits because of the young tree plantation. Thus this measured distance was not included so as not to skew the averages.

Conclusion:

On average for the entire timber sale, riparian reserve requirements for non-fish bearing streams were met. One individual area did not meet the riparian reserve requirements for non-fish bearing streams.

All riparian reserve requirements for fish bearing streams were exceeded.

Comments:

The average distance measurements for the 9 units with non-fish bearing stream riparian reserves, ranged from -5% to +43%, which meets or exceeds the 10% (average) accuracy requirement for layout of riparian reserve boundaries. Overall the average for the entire sale exceeded the required 160 feet riparian reserve width by 10% which is within the accuracy requirement. NWFP/RMP requirements for riparian reserve widths were not met for 1 stream north of Unit #2 boundary. This non-fish bearing stream is located within an existing young forest plantation, approximately 50 feet from the marked boundary of Unit #2. The required 160 foot wide riparian reserve was not delineated for this stream. This resulted because the stream in this dense plantation had no visible indicators of water movement from the nearby road during the dry summer months when the field work was completed for this unit. The field crew did not explore this dense plantation to look for an intermittent stream. Because of the total riparian reserve width averages for non-fish bearing streams, the environmental effects of this one narrowed reserve is not considered to be significant.

Within this sale area, Units #2 and #7 are in proximity to a fish bearing stream (Canton Creek). For the 1 transect measured between each unit boundary and this stream, distance measurements ranged from +15% to +16% more than the required riparian reserve widths. For Unit #2 the edge of the road #25-1-25.0 B on the NE portion of the unit was used as the boundary which is reflected in the transect 6 distance measurement. The unit could be expanded in the future to include the portion of the late successional forest to the NE of this road.

Monitoring Question 3:

Are management activities in Riparian Reserves consistent with SEIS Record of Decision Standards and Guidelines, and RMP management direction?

Monitoring Requirement:

At least 20 percent of the activities within Riparian Reserves will be examined prior to project initiation and reexamine following project completion, to determine whether the actions were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction. In addition to reporting the results of this monitoring, the Annual Program Summary will also summarize the types of activities that were conducted or authorized within Riparian Reserves.

Monitoring Performed:

Class of 98 timber sale (sold-unawarded). Followup monitoring on Red Top Salvage II (sold, awarded, suspended).

Findings:

Class of 98 timber sale

No silvicultural or timber harvest operations are proposed within Riparian Reserves for the Class of 98 timber sale.

A culvert is to be replaced on Road No. 29-4-15.1 that will allow for passage of a 100-year flood event in keeping with Road Management S&G for Riparian Reserves (RF-4, ROD/S&G, p. C-33), which states: "New culverts, bridges, and other stream crossings shall be constructed, and existing culverts, bridges, and other stream crossings determined to pose a substantial risk to riparian conditions

will be improved, to accommodate at least the 100-year flood, including associated bedload and debris.” The replacement of the culvert will also serve to remove a physical barrier to fish passage, and restore access to an estimated half-mile of habitat, as stated in the Hydrology/Fisheries staff report to the Environmental Assessment (EA) for the Class of 98 harvest plan. This is consistent with recommendations from the Myrtle Creek Watershed Analysis (p. 50) and the goals of components 2, 3, 4, 5, 6, 7 and 9 of the Aquatic Conservation Strategy (ROD/S&G, p. B-11).

Decommissioning activities associated with the sale contract include the removal of a stream crossing culvert and embankments on Road No. 29-4- 21.1, in order to restore the original stream channel and banks. This is consistent with the goals of ACS objectives 2, 3, 4 and 5, and is also consistent with recommendations found in the Myrtle Creek Watershed Analysis (p. 50).

Followup Monitoring:

Red Top Salvage II (sold, awarded, suspended). Followup monitoring is pending.

Monitoring Performed:

The Happy Summit Density Management is the only project monitored in the Swiftwater Resource Area.

Project Monitored, Specific Information:

Happy Summit Density Management

Findings:

Operations within the riparian reserve are intended to “accelerate development of large conifers of various forms and structure for large trees and future recruitment of coarse woody debris. . .” (Decision Record [DR], p. 2; EA, p. 5; S&G, p. B-32). The EA allows for harvesting in riparian reserves to meet the above stated long term goals (EA, p. 2; RMP, pp. 19, 33 and 40). The DR and EA required design features which identify the BMPs to mitigate impacts to water resources and soils. These are carried from the EA into the sales contract. The following BMPs will need to be reviewed in the field after the contract has been completed:

1. Decommission portion of the 20-6-36.0 road and the final 575 feet of the 21-6-14.1 road. These roads would be subsoiled to improve infiltration. The 20-6-35.0 road beyond its intersection with the 20-6-25.0 road would be blocked to traffic.
2. Approximately 2.5 miles of road would have drainage features and surfacing added to meet RMP standards.
3. Cable yarding would not occur across streams.
4. Twenty to one 100 foot no cut buffers would be along intermittent and perennial streams. No cut buffers greater than 20 feet were developed to prevent logging disturbance in slope stability concern areas (unit #5). Trees within 100 feet of streams but outside the no cut buffer would be directionally felled away from or parallel to streams and yarded away from the streams.
5. Dry season yarding (May 15 to October 15) would be required for Units 1 and 3. Work would not occur during period of exceptionally heavy precipitation and wet conditions.

6. Cable yarding would have at least one-end suspension.
7. Cable yarding corridors with excess gouging would be hand waterbarred.
8. Several small patches in unit #5 were kept as no cut zones to prevent logging disturbance in slope stability concern areas.

Conclusion:

Management activities in Riparian Reserves were consistent with SEIS Record of Decision Standards and Guidelines, and RMP management direction.

Comment/Discussion:

None.

Monitoring Question 4:

A) Do all mining operations have a plan of operations that address the required issues identified in the RMP? B) Where alternatives exist, are structures, support facilities, and roads located outside the Riparian Reserves? C) Are all solid and sanitary waste facilities handled as outlined in management direction in the minerals management portion of the RMP?

Monitoring Requirement:

All approved mining Plans of Operations will be reviewed to determine if: A) both a reclamation plan and bond were required, B) structures, support facilities and roads were located outside of Riparian Reserves, or in compliance with management action/direction for Riparian Reserves if located inside the Riparian Reserve, C) and if solid and sanitary waste facilities were excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with RMP management direction.

Monitoring Performed:

Program review.

Findings:

No plans of operations were filed during FY98.

Conclusion:

RMP objectives were met.

Comment/Discussion:

None.

Late-Successional Reserves

Expected Future Conditions and Outputs

Development and maintenance of a functional, interacting, late-successional, and old-growth forest ecosystem in Late-Successional Reserves

Protection and enhancement of habitat for late-successional and old-growth forest-related species including the northern spotted owl and marbled murrelet.

Implementation Monitoring

Monitoring Question 1:

What is the status of the preparation of assessment and fire plans for Late-Successional Reserves?

Monitoring Requirements

Status of all Late-Successional Reserve Assessments will be reported.

Monitoring Performed:

LSR Assessments were reviewed.

Findings:

Late-Successional Reserve Assessments have been completed and reviewed by the Regional Ecosystem Office for late-successional reserves RO 151, 222, 251, 257, 259, 260, 261, 2663, 254, 265, 266 and 268. All large LSRs on the Roseburg District are now covered by a completed and REO reviewed LSR assessment with the exception of RO 223. The LSR assessment for RO 223 is expected to be completed and reviewed by REO during fiscal year 1999. Many of the LSR assessments were joint efforts involving the US Forest Service and other BLM districts.

Conclusion:

RMP requirements were met.

Comment/Discussion:

None

Monitoring Question 2:

Were activities conducted or authorized within Late-Successional Reserves consistent with SEIS Record of Decision Standards and Guidelines, RMP management direction and Regional Ecosystem Office review requirements?

Monitoring Requirements

At least 20 percent of the activities that are authorized or conducted within Late-Successional Reserves will be reviewed in order to determine whether the actions were consistent with SEIS Record of Decision Standards and Guidelines, RMP management direction and Regional Ecosystem Office review requirements.

Monitoring Performed: Tree planting and manual maintenance.

Findings:

Within LSR#259, initial planting was completed on 242 acres. Within LSR#223, 11 acres were replanted due to inadequate stocking from a previous planting. All units were monitored during planting. A variety of species appropriate to the site were planted on all units to meet LSR objectives.

A manual maintenance project of 108 acres was done within LSR#259 and 141 acres in LSR#223. These units met the criteria of undesirable vegetation (competition) delaying attainment of late-successional conditions. All the manual maintenance units were reviewed so that they met the treatment specifications required to meet LSR objectives. Certain species were reserved from cutting. Sprouting hardwood clumps were cut to one main sprout to maintain the hardwood component.

Conclusion:

These reforestation and maintenance activities meet the criteria for exemption from REO review or are consistent with the LSR Assessment and are also consistent with the ROD and RMP.

Comment/Discussion:

None.

Monitoring Performed:

The Happy Summit Density Management is the only project monitored in the Swiftwater Resource Area.

Findings:

Happy Summit Density Management, the only FY 1998 timber sale within LSR, occurred within LSR R0267 and it followed the Oregon Coast Province - Southern Portion - LSR Assessment. On a broad basis, the sale units were located in high priority thinning areas as outlined in the LSR assessment. Other more specific measures for the sale are discussed in the other implementation questions covering Happy Summit in this document.

Conclusion:

RMP requirements were met.

Adaptive Management Areas

Expected Future Conditions and Outputs

Utilization of Adaptive Management Areas for the development and application of new management approaches for the integration and achievement of ecological health, and economic and other social objectives.

Provision of well-distributed, late-successional habitat outside reserves; retention of key structural elements of late-successional forests on lands subjected to regeneration harvest; restoration and protection of riparian zones; and provision of a stable timber supply.

Implementation Monitoring

Monitoring Question 1

What is the status of the development of the Little River Adaptive Management Area plan, and does it follow management action/direction in the RMP ROD (pg 83-83)?

Monitoring Requirements

Report the status of AMA plan in Annual Program Summary as described in Question 1.

Monitoring Performed:

Little River AMA plan reviewed.

Findings:

In October, 1997 REO reviewed a draft of the Little River AMA plan. Both Roseburg BLM and Umpqua National Forest are currently operating under the draft plan. No strategy has been developed yet to finalize the draft plan.

Conclusion:

RMP requirements were met.

Matrix

Expected Future Conditions and Outputs

Production of a stable supply of timber and other forest commodities.

Maintenance of important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as down logs, snags, and large trees.

Assurance that forests in the Matrix provide for connectivity between Late-Successional Reserves.

Provision of habitat for a variety of organisms associated with early and late-successional forests.

Implementation Monitoring

Monitoring Question 1:

Is 25-30 percent of each Connectivity/Diversity Block maintained in late-successional forest condition as directed by RMP management action/direction?

Monitoring Requirements

At least 20 percent of the files on each year's timber sales involving Connectivity/Diversity Blocks will be reviewed annually to determine if they meet this requirement.

Monitoring Performed:

Class of 98 timber sale.

Findings:

Class of 98 timber sale

Class of 98 Timber Sale area includes Connectivity block # 12 - T29S, R4W, Section 17, & 19.

Pre Harvest Status:

Total area block # 12	884 acres
Total acres > 80 years	360 acres
percent > 80 years	40.7 %

Post Harvest Status:

Harvest Acres	22 acres
Total acres > 80 years	338 acres
percent > 80 years	38.2 %

Monitoring Performed:

The Bell Mountain Regeneration Harvest is the only sale for FY98 in the Swiftwater Resource Area that had Connectivity.

Findings:

For the Connectivity block in sections 27 and 28, total area is 627 acres. The total late successional forest in this block is 341 acres (54%). After harvest of Bell Mountain is complete there will be approximately 306 acres (49%) late successional forest in this Connectivity block.

Conclusion:

Guidelines established by the RMP have been met.

Comment/Discussion:

None.

Monitoring Question 2

Are late-successional stands being retained in fifth-field watersheds in which Federal forest lands have 15 percent or less late-successional forest?

Monitoring Requirements

All proposed regeneration harvest timber sales in watersheds with less than 15 percent late-successional forest remaining will be reviewed prior to sale to ensure that a watershed analysis has been completed.

Monitoring Performed:

Review of all Fiscal Year 1998 proposed regeneration harvest timber sales.

Findings:***Class of 98 timber sale***

Located in the Myrtle Creek fifth-field watershed, Class of 98 timber sale is the only regeneration harvest timber sale approved in FY 1998 (FONSI signed September 10, 1998). Watershed analysis was completed for the Myrtle Creek watershed in January 1997. After harvest of the 205 acres included in the Class of 98 timber sale, 54% of the watershed is retained as late-successional forest.

Conclusion:

No regeneration harvest timber sales have been planned in watersheds with less than 15 percent late-successional forest. RMP objectives have been met.

Comment/Discussion:

None.

Findings:

Four timber sales had NEPA analysis completed in 1998 (Decisions were signed in FY98 thereby completing the analysis). Of these sales, two were density management or commercial thinning treatments that were in stands that were less than 80 years old and therefore would not change the percentage of late-successional forest in the watershed. The following table of the two remaining timber sales summarizes the acres of Late-Successional Forest in each respective watershed:

Timber Sale	5 th Field Watershed	Acres in Late-Successional Forest ¹	% of Watershed in Late-Successional Forest
Christopher Folly	Canton Creek	20,818	67.6%
Bell Mountain	Elk Creek	18,811	41.9%

¹ The ROD (pg. B-2) definition of Late-Successional Forest is 80 years and older. The acreage and percentage is for federal lands only, therefore this does not factor in private lands.

Conclusion: RMP requirements were met.

Air Quality

Expected Future Conditions and Outputs

Attainment of National Ambient Air Quality Standards, Prevention of Significant Deterioration goals, and Oregon Visibility Protection Plan and Smoke Management Plan goals.

Maintenance and enhancement of air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

Implementation Monitoring

Monitoring Question 1:

Were efforts made to minimize the amount of particulate emissions from prescribed burns?

Monitoring Requirements

At least twenty percent of prescribed burn projects carried out in FY 98 and subject to the current RMP will be randomly selected for monitoring to assess what efforts were made to minimize particulate emissions.

Monitoring Performed:

High Noon timber sale unit no. 6.

Findings:

High Noon timber sale

This was the only unit burned in FY 98. Unit no. 6 was prescribed broadcast burned on June 6, 1998. Under approved Smoke Management clearance from the Oregon Department of Forestry, Ignition commenced at 0900 hrs and was completed eight hours and 50 minutes later. A slow ignition sequence was necessary to avoid damage to the retention trees. Conditions at the time of ignition as reported in the smoke management report included: 10 hour fuel moisture of 18%, 1000 hour fuel moisture of 35%, temperature of 55 degrees F, relative humidity of 65%, and wind speed of 1 MPH from 270 degrees. ½ inch or more of rainfall occurred (within 24 hour period) 12 days prior to ignition. Mopup commenced the day following ignition and continued for several days, until the unit was smoke free. The unit was scanned with infrared equipment (probeye) to assure the unit was 100% out.

Frequent pre-burn monitoring occurred over a several week period to schedule this ignition at the earliest possible opportunity to minimize risk to retention trees. The prescribed burn occurred within one or two days of 10 hour time lag fuels drying into parameters. The unit was burned at the wet extreme of the fuel moisture parameters in the prescribed fire plan. A short duration and low intensity fire was achieved with no damage to residual trees. Duff, litter, and punky logs were minimally reduced as a result. Rain occurred the evening after ignition and continued overnight. This rain significantly reduced the residual smoke and provided ideal conditions for rapid mopup.

Conclusion:

Efforts were made to reduce particulate emissions from prescribed burns.

Comment/Discussion:

None.

Project Monitored, Specific Information:

Four (4) sale units in the Four Gates Timber Sale were monitored for Air Quality as referenced in question 1 above. This project is located in the Swiftwater Resource Area.

Findings:

Four Gates, Units # 4-7 : Successful efforts were made to minimize particulate emissions from prescribed burning. Smoke management approval for burning the four units was secured. Weather conditions featuring unstable air masses were present the days of ignition. This provided good vertical lifting and mixing, aiding in rapid dispersion of the smoke (particulate emissions). These units were burned in the spring and fall of 1998 after several inches of rain had soaked the ground and duff layers. The units were burned at the wet end of the prescribed fire prescription. Specific efforts to reduce fuel consumption and lower emissions included:

- Broadcast burning occurred on only 10% of the total area treated. Spring-like burning conditions reduced the consumption of larger fuels, thereby reducing emissions.
- Two (2) units were machine piled and burned in the fall, during periods of advantageous weather favoring smoke dispersal. Large logs and root wads were not ignited
- One unit was hand piled, and burned in the fall after heavy rains. Only heavy slash concentrations were targeted for ignition, leaving large stumps and logs untouched.

Unit #5 was mopped up and had no visible smokes after 2 days. The piled / burned units were extinguished by heavy fall rains soon after ignition. No smoke intrusions occurred for the local Designated Areas monitored by the Douglas Forest Protection Agency.

Overall particulate emissions were minimized from prescribed burning through ignition timing, aggressive mop-up, and the reduction of large, heavy fuels consumed by fire.

Conclusion:

RMP requirements were met.

Monitoring Question 2:

Are dust abatement measures used during construction activities and on roads during BLM timber harvest operations and other BLM commodity hauling activities where needed?

Monitoring Requirements

At least 20 percent of the construction activities and commodity hauling activities carried out in FY 98 and subject to the current RMP will be monitored to determine if dust abatement measures were implemented where needed.

Monitoring Performed:

High Noon Timber Sale and Upper Olalla Road Renovation and Obliteration (Jobs-in-the-Woods contract).

Findings: The High Noon Timber Sale includes Exhibit 'C' Specification 601 as part of the contract. Water is required by this specification to abate dust during the construction phase of the contract. In addition, the BLM applied a dust pallative to the main haul road to reduce dust problems during log hauling. There are two (2) residences near the haul route.

The "Jobs-in-the Woods" contract contained Specification 107.10 "Environmental Protection". The specification requires the contractor to operate in a manner that prevents pollution. Water was applied to the rock truck haul route for this contract to reduce dust.

Conclusion:

RMP requirements were met.

Comment/Discussion:

None.

Project Monitored, Specific Information:

Four gates timber sale and Right View timber sale in the Swiftwater R.A..

Findings:

Dust abatement operations were not required for road construction on these two timber sales. Typically, dust abatement operations are used only if significant amounts of dust are produced during hauling, and local residences are being impacted. Hauling operations occurred during the summer of 1998 and no local residences were impacted. Impacts on air quality from road construction and timber hauling were of short duration, local in nature, and had little impact on regional air quality.

Conclusion:

RMP requirements were met.

Water and Soils

Expected Future Conditions and Outputs

Restoration and maintenance of the ecological health of watersheds. See Aquatic Conservation Strategy Objectives.

Improvement and/or maintenance of water quality in municipal water systems.

Improvement and/or maintenance of soil productivity.

Reduction of existing road mileage within Key Watersheds or at a minimum no net increase.

Implementation Monitoring

Monitoring Question 1:

Are site specific Best Management Practices, identified as applicable during interdisciplinary review, carried forward into project design and execution?

Monitoring Requirement:

At least 20 percent of the timber sales and silviculture projects will be selected for monitoring to determine whether or not Best Management Practices were implemented as prescribed both before and after implementation. The selection of management actions to be monitored should include a variety of silvicultural practices, Best Management Practices, and beneficial uses likely to be impacted where possible given the monitoring sample size.

Monitoring Performed:

Class of 98 timber sale (sold-unawarded)-98. Followup monitoring on Dream Weaver timber sale(sold-unawarded) -97, Buck Fever timber sale (sold-unawarded)-97, Lean Louis timber sale (awarded, active)-96 and Curtin Creek timber sale (awarded, suspended)-96.

Findings:

Class of 98 timber sale (sold-unawarded)

The specific recommendation for clumping retention trees in the NW corner of unit 3 (unit C in the EA) was carried forth from the soils report to the environmental assessment (EA), decision document, and project design.

In unit 7 (unit G in the EA), the specific recommendations of predesignating skid trails, directional falling, and tillage of compacted areas to keep the productivity loss due to soil compaction to less than 1 percent were carried forth from the soils report to the EA, decision document, and project design.

Other recommended mitigation applying to all units in the soils report were to clump retention trees in and suspend harvested logs over or away from draws, depressions, headwalls and ephemeral drainage and unstable areas not qualifying as Riparian Reserve. These recommendations were carried forth from the soils report to the EA, and decision document. These recommendations were left to the layout crew to implement through their layout design and through contract specifications.

Broadcast burning was not recommended in the soils report for units 1 (A in EA), 2 (B), 3 (C), 4 (D) and 6 (F). It was also recommended in the soils report to minimize intensity and duration of prescribed fire treatments for units 5 (E), 7 (G), and 8 (H). These recommendations were carried forth to project design and were included in the contract specifications.

Dry season cable logging was recommended in the soils report for units 1 (A), 2 (B), 3 (C), 6 (F), 7 (G) and the portion of unit 5 (E) above the 29-4-15.1 road. The recommendations for Units 3, 6, and 7 were carried forth to project design. The EA and decision document and project design allows for wet season helicopter yarding of units 1 and 2, as mitigation for soils concerns.

Possible full road decommissioning of 1.5 miles was reported in the EA and contingent upon receiving approval from holders of right of way agreements for those roads. After receiving approvals, ½ mile of full road decommissioning was identified in the decision document and carried forth to project design. Follow-up monitoring after execution will determine if project design features are carried out as recommended.

Followup Monitoring:

Dream Weaver timber sale (sold-unawarded), Buck Fever timber sale (sold-unawarded), Lean Louis timber sale (active sale), and Curtin Creek Timber Sale (Olalla Wildcat units 8&9, under suspension) have not been completed on the ground. Follow-up monitoring after execution will determine if project design features are carried out as recommended.

Conclusion:

RMP objectives have been met.

Comment/Discussion:

Class of 98 timber sale (sold-unawarded):

Other mitigation actions should be considered for the 1 mile of road recommended for decommissioning, but not approved because of right of way agreements. It was stated in the EA that if permission was not granted for full decommissioning, the roads would be looked at for other possibilities to mitigate hydrologic effects (e.g., surfacing, adding additional culverts, and closing or blocking roads). A contract modification, if necessary, could provide this mitigation.

Monitoring Performed:

Happy Summit Density Management

Findings:

The project design features which identify the BMPs to mitigate impacts to water resources and soils are carried from the EA into the sales contract. The following BMPs will need to be reviewed in the field after the contract has been completed.

1. Decommission portion of the 20-6-36.0 road and the final 575 feet of the 21-6-14.1 road. These roads would be subsoiled to improve infiltration. The 20-6-35.0 road beyond its intersection with the 20-6-25.0 road would be blocked to traffic.
2. Approximately 2.5 miles of road would have drainage features and surfacing added to meet RMP standards.

3. Cable yarding would not occur across streams.
4. Twenty to one hundred ft. no cut buffers would be along intermittent and perennial streams. No cut buffers greater than 20 feet were developed to prevent logging disturbance in slope stability concern areas (unit #5). Trees within 100 ft. of streams but outside the no cut buffer would be directionally felled away from or parallel to streams and yarded away from the streams.
5. Dry season yarding(May 15 to October 15) would be required for Units 1 and 3. Work would not occur during any period of exceptionally heavy precipitation and wet conditions.
6. Cable yarding would have at least one-end suspension.
7. Cable yarding corridors with excess gouging would be hand waterbarred.
8. Several small patches in unit #5 were kept as no cut zones to prevent logging disturbance in slope stability concern areas.

Conclusion:

RMP requirements were met.

Monitoring Question 2:

What watershed analyses have been or are being performed? Are watershed analyses being performed prior to management activities in Key Watersheds?

Monitoring Requirement:

Watershed analyses will be reviewed for status.

Monitoring Performed:

Program review.

Findings:

<u>Watershed Analysis</u>	<u>Key Watershed</u>	<u>Date Completed</u>
John/Days/Coffee	within South Umpqua	September 1995
Stouts/Poole/Shively-O'Shea	within South Umpqua	January 1996
Myrtle Creek		January 1997
Deadman/Dompier	within South Umpqua	April 1997
Cow Creek	Includes Middle Creek	September 1997
Olalla-Lookingglass		April 1998
Canyonville/Canyon Creek		In Progress
Upper Middle Fork Coquille		In Progress

Watershed analysis has been completed for the South Umpqua and Middle Creek Key Watersheds within the South River Resource Area, as of September 1997.

Conclusions:

RMP requirements were met.

Comment/Discussion:

None.

Findings:

<u>Watershed Analysis</u>	<u>Date Completed</u>
Elkton-Umpqua	June, 1998

Watershed Analyses have been completed for key watersheds, Smith River & Canton Creek.

Conclusion:

RMP requirements were met.

Monitoring Question 3:

What watershed restoration projects are being developed and implemented?

Monitoring Requirement:

The Annual Program Summary will address Implementation Question 3.

Monitoring Performed:

Program review.

Findings:

The Roseburg District implemented several watershed restoration projects in FY 98, with an emphasis in the district's Tier 1 (Key) Watersheds. Through Job-in-the-Woods funding, the district continued its aggressive program of removal or replacement/upgrading of problem culverts, in order to provide or improve passage for all life stages of fish and aquatic organisms. In addition, the district realized an increase in decommissioning of unnecessary and/or problem roads located in riparian areas. Other rehabilitation work was accomplished jointly through the BLM's maintenance program, procurement contracts, and the district's timber sale program. These rehabilitation projects consisted mainly of road improvement (upgrading) and road decommissioning.

Projects that are in the planning and contracting phases for implementation in FY 99 include road improvements and full decommissioning, pond maintenance, and replacement/upgrading of major culverts to pass the 100-year flood, as well as to provide fish passage, and stream channel restoration.

Specific watershed restoration projects funded independent of timber sales for FY 98:

Major Culvert Replacements/Removal

South River: 2 (Skunk Creek, Willingham Creek)

Swiftwater: 10 (South Fork Smith River, Yellow Lake Creek, North Fork Big Tom Folley)

Road Decommissioning (see also Water and Soils, Question 5)

South River: Curtain Creek, Fate Creek, Lavadoure Creek and Skunk Creek

Swiftwater: South Fork Smith River, North Fork Big Tom Folley Creek, Saddle Butte Creek

Road Improvements: (see also Water and Soils, Question 5)

South River: Ollala Creek, Willingham Creek

Swiftwater: North Fork Big Tom Folley Creek

Restoration Projects Implemented FY 98 (Independent of Timber Sales)

- N. Fork Big Tom Folley Road (21-7-2.1) Upgrade/Decommission

- Canton Creek Restoration

Approximately 4.9 miles of road were decommissioned

- Smith River Risk Reduction & Restoration

Approximately 0.7 miles of road were decommissioned

- Major Culvert Replacements

South Fork Smith River (4), North Fork Big Tom Folley (2)

- Major Culvert Removals

Yellow Lake Creek (1), North Fork Big Tom Folley (1)

Conclusions:

RMP objectives were met.

Comment/Discussion:

None.

Monitoring Question 4:

What is the status of development of road or transportation management plans to meet Aquatic Conservation Strategy Objectives?

Monitoring Requirement:

The Annual Program Summary will address Implementation Question 4.

Monitoring Performed:

Program review.

Findings:

The Western Oregon Transportation Management Plan has been completed (1996). The South River Resource Area is in the process of developing Transportation Management objectives for individual roads. Phase I (individual field evaluation of the roads) is 80% complete. Phase II (the written objective portion of the process) is ongoing with a target completion date of October 1999 for the first draft. An up-to-date and functioning storm patrol plan is in place for the resource area.

Conclusions:

RMP objectives were met.

Comment/Discussion:

None.

Monitoring Question 5:

What is the status of closure, elimination or improvement of roads to further Aquatic Conservation Strategy Objectives; and to reduce the overall road mileage within Key Watersheds? If funding is insufficient to implement road mileage reductions, are construction and authorizations through discretionary permits denied to prevent a net increase in road mileage in Key Watersheds?

Monitoring Requirement:

The Annual Program Summary will address Implementation Question 5.

Monitoring Performed:

Program review.

Findings:

The following definitions were used for categorizing the road status in the tables below.

Status -

Completed - All road construction and/or decommissioning within a contract has been completed and approved.

Active - Contract has been awarded but road construction and/or decommissioning within a contract has NOT been completed and approved.

Proposed - Road construction and/or decommissioning projects where the contracts have not yet been awarded for FY 98.

Road Activities

Improve Drainage &/or Road Surfacing - Road improvements in which extra drainage structures are added and/or rock is added using BMPs in order to raise the road level to current RMP standards, effectively reduce sedimentation, and increase infiltration of intercepted flows.

Temporary Road Construction - Roads that are constructed and then fully decommissioned in the same season.

Semi-Permanent Road Construction - Roads that are constructed and then fully decommissioned within the life of the contract.

Decommission - Existing road segment will be closed to vehicles on a long-term basis, but may be used again in the future. Prior to closure, the road will be prepared to avoid future maintenance needs; the road will be left in an “erosion-resistant” condition which may include establishing cross drains, and removing fills in stream channels and potentially unstable fill areas. Exposed soils will be treated to reduce sedimentation. The road will be closed with a device similar to an earthen barrier (tank trap) or equivalent.

Full Decommission - Existing road segments determined to have no future need may be subsoiled (or tilled), seeded, mulched, and planted to reestablish vegetation. Cross drains, fills in stream channels and potentially unstable fill areas may be removed to restore natural hydrologic flow. The road will be closed with a device similar to an earthen barrier (tank trap) or equivalent.

South River Resource Area:

At this point in time there are more miles of road that have been permanently constructed than have been Fully Decommissioned in the Upper and Middle Smith River key watershed. Yet because of the projects currently under contract, it is expected that this will change over the next several years (see Upper and Middle Smith River active and proposed miles).

Swiftwater Resource Area:

Since the RMP was implemented, 8.96 miles of permanent road have been built throughout the Swiftwater Resource Area (3.33 miles under RMP sales, and 5.63 miles under right-of-way agreements). Of these roads, 1.59 miles have been built in a Tier I Key Watershed. An additional 0.15 miles of permanent road is proposed to be built, none of which is in a Key Watershed.

Since the RMP was implemented, 8.7 miles of road have been fully decommissioned (4.9 miles within Tier 1 Key Watersheds, 3.18 miles outside of Key Watersheds). An additional 7.91 miles of road are under contract to be decommissioned (1.34 miles within Tier 1 Key Watersheds, 6.57 miles outside Key Watersheds).

A net decrease in road mileage will occur, not only in Tier I Key Watersheds, but also for the resource area. Road mileage within Tier I Key Watersheds will decrease by 4.65 miles when all projects are completed, and there will be a decrease of 2.23 miles of road outside of Key Watersheds.

Table 23. All South River Resource Area Projects *Not* in a Key Watershed Through FY '98

5 th Field Watershed	Status	Permanent New Road Construction (miles)	Temporary Road Construction (miles)	Semi-Permanent Road Construction (miles)	Decommission Existing Roads (miles)	Full Decommission Existing Roads (miles)	Improve Drainage &/or Rock Existing Natural Surface Road (miles)
Cow Creek	Completed	4.27*					
Middle Fork Coquille	Completed	0.12*					
	Active		1.33				0.58
	Proposed	0.12	0.27				0.21
Myrtle Creek	Completed	0.43	0.83			0.07	25.37
	Active		1.45			3.60	0.68
	Proposed	0.03	1.88	0.37		2.97	25.37
Middle South Umpqua	Completed	1.61		0.13		0.11	
Olalla Lookingglass	Completed	0.54*				3.00	11.10
South Umpqua	Completed	0.40*					
Total		7.52**	5.76	0.5	0	9.75	63.31

* Private road built under R/W agreement

** 5.33 miles of the total 7.52 miles were built by private R/W holders

Table 24. Swiftwater Resource Area non Key Watersheds

5 th Field Watershed	Status	Permanent New Road Construction (miles)	Temporary Road Construction (miles)	Semi-Permanent Road Construction (miles)	Decommission Existing Roads (miles)	Full Decommission Existing Roads (miles)	Improve Drainage &/or Rock Existing Natural Surface Road (miles)
Elk Creek	Completed	0.1	0.8		2.8	1.4	14.8
	Active	1.1	2.8			1.3	20.3
	Proposed	0.6	1.2		0.9	0.5	7.0
Upper Umpqua	Completed		1.4		0.7	3.4	5.4
	Active	0.2	0.5		0.7	0.5	21.3
	Proposed		0.2				0.5
Calapooya	Completed	0.1					
	Active		0.5	1.1		0.7	4.6
	Proposed		0.3		2.3	0.8	8.7
Little River ¹	Completed		0.7	1.2			
	Active	0.5	2.6		0.5	17.0	72.3
	Proposed						
Rock Creek	Completed						
	Active		0.6		0.9	0.9	5.0
	Proposed		0.8			0.3	1.7
Lower N. Umpqua	Completed		0.2			0.6	

Middle N. Umpqua	Active						
	Proposed						
	Completed	0.1			0.4		
	Active	0.1	0.7			2.4	5.7
	Proposed						
R/W Plats 95-97		5.3					
Total		8.1	13.3	2.3	9.2	29.8	167.3

¹ Figures include USFS activities in this 5th field watershed which are part of the federal land base. The USFS portion includes: Permanent Road, 0.5 mi; Temp Road, 2.0 mi; Decommission, 0.5 mi; Full Decommission, 14.8 miles; Improvement, 48.3 miles

Table 25. Roseburg District Key Watersheds

5 th Field Watershed	Status	Permanent New Road Construction (miles)	Temporary Road Construction (miles)	Semi-Permanent Road Construction (miles)	Decommission Existing Roads (miles)	Full Decommission Existing Roads (miles)	Improve Drainage &/or Rock Existing Natural Surface Road (miles)
South Umpqua	Completed	1.29	0.41	0.64	1.20	4.90	25.14
	Active		2.21			1.34	8.73
	Proposed						
Cow Creek	Completed	0.30					
	Active						
	Proposed						
Canton Creek	Completed ¹				0.4	19.3	19.3
	Active		0.1	0.1			16.7
	Proposed ²					7.5	3.3
Upper & Middle Smith River	Completed	1.4			1.5	0.7	0.2
	Active	0.3	2.0			1.6	24.1
	Proposed					0.9	
Total		3.29	4.7	0.74	3.1	36.2	97.47

¹ These figures include USFS **completed** activities which are part of the federal land base in this 5th field watershed. They include: Full Decommission, 14.4 miles; Improvement, 14.7 miles

² These figures include USFS **planned** activities which are part of the federal land base in this 5th field watershed. They include: Full Decommission, 7.5 miles; Improvement, 3.3 miles

Conclusion:

RMP requirements were met.

Comment/Discussion:

None.

Monitoring Question 6:

Is long term site productivity maintained or improved?

- A) In forest management activities involving ground based systems, are growth loss effects insignificant (less than one percent)?
- B) Was prescribed burning on highly sensitive soils (Category I) avoided? If prescribed burning took place on highly sensitive soils, was rationale and analysis provided in the environmental assessment or other documents of why the burning was essential for resource management and was there a site specific prescription provided to minimize adverse impacts on soil properties? Was the prescription to minimize impacts on soil properties implemented successfully?

Monitoring Requirement:

- A) All ground based activities will be assessed to determine if growth loss effects are insignificant (less than 1 percent). Ground-based skidding and ground-based site preparation activities will be assessed whether they followed the pertinent RMP management action/direction provided under water and soils, and timber.
- B) All prescribed burning on highly sensitive soils carried out in FY 98 and subject to the current RMP will be assessed to answer question 7.B.

Monitoring Performed:

Program review.

Findings:

- A) Old Dillard timber sale had areas of ground-based harvest and machine piling of slash for site preparation. Field review concluded the areas with ground-based activities had less than 1% site productivity loss.
- B) High Noon timber sale (unit 5) had hand piled slash burned on category 1 soils. In the areas of category 1 soils, the burning resulted in low impact to the soil resources.
- C) Ground Based Activities: Bell Mountain, Christopher Folly, and Johnson Creek CT. All of these timber sales, with respect to ground based activity, had adequate documentation in the EA and proper follow through of BMP's into the contract. These BMP's are anticipated to maintain less than 1% productivity loss and keep this project within standards and guidelines. The BMP requirements in each EA will need to be followed-up in the field.

Conclusions:

RMP objectives were met.

Comment/Discussion:

None

1996 & 1997 FOLLOW-UP MONITORING FOR GROUND BASED QUESTION 6A

Monitoring Performed:

Field review of three timber sales (Right View, Black Hole and Four Gates) was conducted to determine effectiveness in regards to question 6a. These sales used machine piling as part of the site prep. Site productivity losses were kept to less than 1% on the areas of machine piling.

Conclusion:

RMP requirements were met.

Project Monitored, Specific Information:

Burning on Highly Sensitive Soils - Black Hole timber sale

In 1998 only one of seven prescribed burn units had significant “category 1 soils” present. The Black Hole timber sale Unit #1 had a steep north aspect with slopes generally exceeding 70%. These soils were classified as category 1 due to steepness by the soil scientist, and it was discussed as an issue at the EA meetings. The silviculturist wanted a site prep treatment to reduce brush and slash, create more planting spots, and reduce plant competition. It was concluded that broadcast burning should be avoided, but a hand pile and burn treatment would be less intrusive to the soil and duff layers.

A prescribed fire plan was developed providing for adequate site prep while minimizing impacts on the soil, duff, downed logs and retention trees and snags. The plan called for hand piling and covering slash between 2 and 6 inches in size (diameter), and burning in the fall or early winter. The actual burning was carried out in late October 1998 after 3-4 inches of rain had soaked the ground. The hand piles were consumed by fire, and slight broadcasting of adjacent fuels occurred as well. Minimal damage was done to retention trees, snags, and downed logs. The District soil scientist determine after post-burn review that only minimal damage was done to soil properties and duff. More than adequate organic matter was left on site and reforestation efforts should be successful.

Conclusion:

RMP requirements were met.

Wildlife Habitat

Expected Future Conditions and Outputs

Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations.

Implementation Monitoring

Monitoring Question 1:

Are suitable (diameter and length) numbers of snags, coarse woody debris, and green trees being left, in a manner as called for in the SEIS Record of Decision Standards and Guidelines and RMP management direction?

Monitoring Requirement:

At least 20 percent of regeneration harvest timber sales in each resource area will be examined by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will also be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction has been followed.

Monitoring Performed:

Class of 98 timber sale (sold-unawarded). Followup monitoring on Lean Louis timber sale (active), Dream Weaver timber sale (sold-unawarded), and Sweet Pea timber sale (sold-unawarded) is still pending project completion.

Findings:

Class of 98 timber sale

Green trees:

The sale is currently unawarded, so no units have been harvested to date. According to cruise data on green tree retention, the following numbers and size classes of green trees were marked for retention:

GREEN RETENTION TREES/ ACRE				
<u>Sale Name</u>	<u>GFMA (all trees)</u>	<u>GFMA (20"+ DBH)⁴</u>	<u>Connectivity (all trees)</u>	<u>Connectivity (20"+ DBH)¹</u>
Class of 98	10.8	9.1	15.6	14.9

Six units of this sale are in GFMA. A total of 1,659 green trees (20"+ DBH)¹ were marked for retention on 183 acres. This averages 9.1 green trees per acre (TPA) marked for retention. One green tree per acre was retained to provide future snag recruitment and a second green tree per acre was retained for decay class 1 and 2 logs. Subtracting two green trees (one for snag and one for log retention) leaves a remaining 7.1 green trees per acre retained. This meets 6-8 TPA required by the ROD for GFMA lands.

Two units of this sale are in a Connectivity/Diversity Block. A total of 327 green trees (20"+DBH)¹ were marked for retention on 22 acres. As in GFMA, one green tree per acre was retained to provide future snag recruitment and a second green tree per acre was retained for decay class 1 and 2 logs. Subtracting the two green trees for snag and log retention leaves 12.9 green trees per acre retained. This meets 12-18 TPA required by the ROD for Connectivity/Diversity Block lands.

Snags:

Sixty-five snags (20"+ DBH)¹ were cruised on the 204 acres included in the harvest units. This equates to 0.3 snags per acre. Eighteen snags were marked for retention, equating to 0.1 snags per acre. As discussed above an additional green tree per acre was marked for retention to provide for the snag component. The existing snags plus the green trees marked for retention total 1.1 snags per acre. The RMP requires management for 40% of the avian cavity dweller population over the landscape. This would require an average of 1.2 snags per acre be retained. Additional trees identified for green tree retention could be added, if needed, to meet the remaining 0.1 deficit; thus, the requirements of the ROD and RMP for snag retention have been met.

Coarse Woody Debris:

Contract stipulations require all decay class 3, 4, and 5 logs be retained on a site after harvesting. Decay class 1 and 2 logs were not marked or required to be retained and may be removed. However, one additional green tree per acre (20"+ DBH)² was marked for retention to meet the ROD and RMP requirements for 120 linear feet per acre of decay class 1 and 2 logs. The average green tree retained on the site contains 140 linear feet. It is anticipated that natural forces (primarily windthrow) will provide infusions of the standing trees into coarse woody debris decay classes 1 and 2. The ROD and RMP requirements to retain coarse woody debris are being met.

Conclusion:

Suitable numbers of snags, coarse woody debris, and green trees are being left, in a manner as called for in the SEIS Record of Decision Standards and Guidelines and RMP management direction. RMP objectives are being met.

Comment/Discussion:

CWD Standards and Guidelines for Matrix lands under the Northwest Forest Plan were clarified in Instruction Memorandum No. OR-95-028, Change 1. Marking additional retention trees and allowing natural forces (primarily windthrow) to provide infusions of trees into CWD decay classes 1 and 2 over time is one of two acceptable strategies which may be used to meet the required post-harvest levels of decay class 1 and 2 logs. The Standards and Guidelines recognize that the linear feet of decay class 1 and 2 logs present on a post-harvest unit may range from zero to several hundred linear feet. Although less than 120 linear feet of decay classes 1 and 2 may exist on the ground in the short term, requirements are met in the long term through natural attrition of standing reserved trees. Monitoring will be completed post harvest (and after site preparation) to measure the amount of green trees, snags and CWD retained.

Monitoring Performed:

Bell Mountain Regeneration Harvest and Commercial Thinning was monitored prior to project initiation, representing approximately 50% of all eligible management actions.

Findings:

Only those units that are planned for Regeneration Harvest are included in the table below. It is expected that the extra retention trees will provide the missing/needed recruitment of snags and CWD within the units after harvesting is completed.

	Pre-Harvest Marking			Post Harvest		RMP
	Unit #2	Unit #5	Unit #6	Unit #7	Unit #9	Required
Green Retention Trees (Greater Than 20")						N/A
GFMA Harvest	7.7	---	---	---	---	6-8/ac
Connectivity Harvest	---	12.3	15.1	19.0	14.3	12-18/ac
Snags (Greater Than 20")	0.63/ac	1.7 /ac	0.72/ac	1.0/ac	0.9/ac	1.2/ac
Coarse Woody Debris Reserved	28.1 ft/ac	87.3 ft/ac	55.4 ft/ac	80.0 ft/ac	54.7 ft/ac	120ft/ac

Conclusion:

RMP requirements were met.

Monitoring Question 2:

Are special habitats being identified and protected?

Monitoring Requirement:

At least 20 percent of BLM actions, within each resource area, on lands including or near special habitats will be examined to determine whether special habitats were protected.

Monitoring Performed:

Class of 98 timber sale and Bell Mountain timber sale.

Findings:

No special habitats were identified in the Class of 98 sale.

Conclusions:

RMP requirements were met.

Comment/Discussion:

None.

Monitoring Question 3:

What is the status of designing and implementing wildlife restoration projects?

Monitoring Requirement:

The Annual Program Summary will address Question 3.

Monitoring Performed:

Reviewed AWP accomplishments.

Findings:

The Area Lead Wildlife Biologist and Silviculturist began scoping for the Slimewater Creek Density Management Project in FY-98. Environmental Analysis is scheduled for August-Sept 1999. This project will be conducted in LSR and will be designed to enhance spotted owl habitat. The proposed treatment will accelerate the development of the stand into a multilayered stand with: large trees, canopy gaps for spatial diversity and understory development, snags, and down wood. Treatments will take advantage of opportunities to optimize habitat for late-successional forest related species, in the short term.

Conclusions:

RMP requirements were met.

Comment/Discussion:

None.

Fish Habitat

Expected Future Conditions and Outputs

See Aquatic Conservation Strategy Objectives.

Maintenance or enhancement of the fisheries potential of streams and other waters, consistent with BLM's Anadromous Fish Habitat Management on Public Lands guidance, BLM's Fish and Wildlife 2000 Plan, the Bring Back the Natives initiative, and other nationwide initiatives.

Rehabilitation and protection of at-risk fish stocks and their habitat.

Implementation Monitoring

Monitoring Question 1:

Are fish habitat restoration and enhancement activities being designed and implemented which contribute to attainment of Aquatic Conservation Strategy Objectives?

Monitoring Requirements

The Annual Program Summary will report on the status of the design and implementation of fish habitat restoration and habitat activities.

Monitoring Performed:

During FY 98, three instream projects were designed in the South River Resource Area. Areas are being identified for potential enhancement activities in future years.

Findings (South River Resource Area):

Three instream projects were designed during FY 98. ACS Objectives were considered in the project designs. Two of the projects were implemented and completed in FY 98 (Skunk Creek stream reclamation project and Willingham Creek culvert replacement). The other is planned for FY 99 (Ben Branch Creek culvert replacement, scheduled to take place with the Class of 98 timber sale).

Skunk Creek is a perennial flowing, nonfish-bearing stream that is tributary to the mainstem of South Myrtle Creek, an anadromous fish-bearing stream containing two T&E fish stocks (i.e., Oregon Coast coho salmon and Umpqua River cutthroat trout). Skunk Creek was a project that removed slide material, a stream crossing, and road fill. The stream was then rehabilitated at the site by recontouring the streambanks and reshaping the stream channel. By removing the slide material and the road crossing and roadfill material from the stream, risks associated with road related failure and increased sedimentation on the fisheries resource and its habitat downstream of the project site was minimized.

Willingham Creek culvert replacement project was done to reduce risk of road failure, restore fish passage, and to meet the 100-year flood flow requirements as described in the BMP. Willingham Creek is a resident fish-bearing stream containing the resident life form of the Federally-listed endangered Umpqua River cutthroat trout. This stream is tributary to Olalla Creek, an anadromous fish-bearing stream containing coho salmon and the sea-going and riverine life forms of the cutthroat trout. Fish passage has been restored and risk of road failure reduced at this site.

Ben Branch Creek culvert replacement project is scheduled to take place as part of the Class of 98 timber sale. The project is designed to reduce the risk of road failure, restore fish passage, and to meet 100-year flood flow requirements as described in the BMP. Ben Branch Creek is a fish-bearing stream containing the Federally-listed endangered Umpqua River cutthroat trout and Oregon Coast coho salmon, as well as steelhead trout. This stream is tributary to South Myrtle Creek, a major anadromous fish-bearing stream containing chinook and coho salmon, and steelhead and cutthroat trout.

Conclusions:

RMP objectives have been met. Aquatic Conservation Strategy Objectives were met.

Comment/Discussion:

Culvert and project monitoring will continue at these sites in the future.

Findings (Swiftwater Resource Area):

RESTORATION PROJECTS IMPLEMENTED

- Culvert Replacements (FY98)
 - S. Fork Smith River (2), Deer Creek (Smith River, 2)
 - Yellow Lake Creek (1), North Fork Big Tom Folley (3 replaced, 1 removed)
- Smith River Risk Reduction & Restoration (EA, FY98)
 - Identify Major Culverts with Fish Concerns to Replace

RESTORATION PROJECTS PLANNED

- Culvert replacements for fish passage (3)
 - Smith River on BLM Road 20-7-27.0
 - unnamed trib in South Fork Smith River, BLM road 21-5-18.0
 - Cleghorn Creek, BLM road 21-7-5.0
- Susan Creek LWD addition/ re-creation of natural log jams (planning in progress)

Conclusion:

RMP requirements were met.

Monitoring Question 2:

Are potential adverse impacts to fish habitat and fish stocks being identified?

Monitoring Requirements:

At least 20 percent of the files on each year's timber sales, and other relevant actions, will be reviewed annually to evaluate documentation regarding fish species and habitat and related recommendations and decisions in light of policy and SEIS Record of Decision Standards and Guidelines and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed:

Class of 98 timber sale. Followup monitoring on Smoke Signal timber sale, Dream Weaver timber sale, Old Dillard timber sale and Curtin Creek timber sale.

Findings:***Class of 98 timber sale***

This sale is sold-unawarded, and no action has taken place at this time.

Potential adverse impacts to fish habitat and fish stocks were identified during the interdisciplinary team process. Most adverse impacts on the fisheries resources from the proposed action (i.e., sedimentation, increase in peak flows, ground-based yarding, etc. . .) are mitigated through the Standards and Guidelines (S&G's) in the SEIS ROD and the Best Management Practices (BMP) in the Roseburg District RMP/ROD.

No fish-bearing streams are adjacent to the proposed harvest units. Nonfish-bearing streams will have a Riparian Reserve width of 160 feet on each side of the stream. New road construction, road maintenance/upgrading, decommissioning, and helicopter landing construction would meet the S&G's and the BMP. Approximately 0.37 miles of permanent road will be constructed to facilitate access for future silvicultural activities and future stand maintenance in units A and B. Approximately 0.38 miles of temporary road will be constructed to accommodate harvest activities. Temporary roads would be decommissioned in the same dry season (i.e., operating season) they are constructed. Approximately 7.0 miles of the proposed haul route would be maintained/upgraded, including the widening of an existing road south of unit G (unit 7 in the timber sale) for a temporary helicopter landing.

During the IDT process, approximately 1.5 miles of road were identified for potential decommissioning. However, upon review by the reciprocal right-of-way agreement holders, they only agreed to approximately 0.5 miles of road for decommissioning. As stated in the EA #105-97-07, "if some of the roads are not approved, other mitigation could be applied that could provide some beneficial impacts, i.e., surfacing, adding additional culverts, and closing or blocking roads. The final outcome would be addressed in the decision documentation". The decision document, dated February 19, 1998, stated 0.5 miles of road would be decommissioned with the timber sale action, but no alternate mitigation was identified for the other 1.0 miles of road.

The stream crossing culvert on the 29-4-15.1 road would be replaced with a culvert designed to meet fish passage requirements and the 100-year flood event requirements in the BMP. Fish passage at this culvert site would be monitored in future years.

FY97 Followup Monitoring***Smoke Signal timber sale, Dream Weaver timber sale***

No activity has occurred on the Smoke Signal timber sale (awarded, inactive) or on Dream Weaver timber sale (sold-unawarded). Followup monitoring is pending sale completion.

FY96 Followup Monitoring***Old Dillard timber sale***

This is an active timber sale on which all right-of-way timber has been cut in the Squaw Creek units 1 and 2. The roads to the units, including spurs, have been constructed. However, these roads have not been approved for timber haul at this time. The fencing project associated with the Squaw Creek units has not been completed. A fence will be constructed on the BLM property boundary to reduce impacts to riparian and upland areas by livestock trespass. The fence is planned for construction following all timber harvest activities. According to the timber sale contract, all timber harvest activities

in the Squaw Creek units must be completed by June 1999. The haul route for the Mt. Shep units (3, 4, and 5) of this sale was renovated. Road surfacing, culvert installation and roadside brushing was completed. Timber harvest, timber haul, and site preparation (i.e., burning) has occurred in all of the Mt. Shep units. Therefore, all contract obligations for the Mt. Shep units have been met by the contractor and that portion of the Old Dillard timber sale is complete.

Roads along the timber sale haul route identified as needing renovation/upgrading for the purpose of mitigating the water routing concerns have been renovated/upgraded. Road construction contract administrator field reports verify that this has been completed, as required in the road construction specifications of the authorization document.

Curtin Creek (Replacement Volume for Olalla Wildcat)

Current status of Project: The regeneration unit was harvested during the winter of 1997. Timber was cut and yarded by a cable system to the existing road adjacent to the unit. The thinning unit has not been harvested and the temporary road proposed to access the unit has not been constructed. Due to a court injunction (Rothstein Ruling), the commercial thinning has been suspended until adequate ESA consultation procedures have been completed and a Biological Opinion has been received by the BLM from the National Marine Fisheries Service. Timber harvest and temporary road construction in the commercial thin unit is expected to begin in August of 1999.

Other than verifying the decommissioning (during the same operating season) of the temporary spur road, there are no specific fisheries related concerns with the remaining harvest unit of this sale.

Conclusions:

RMP objectives have been met to this point in the timber sale contracts.

Comment/Discussion:

Curtin Creek

Once temporary spur road decommissioning following harvest activities is verified, implementation monitoring will be completed.

Class of 98 timber sale

Other mitigation actions should be considered for the 1 mile of road recommended for decommissioning, but not approved because of right of way agreements (see Water and Soils, Question 1, Comment/Discussion).

Findings:

Happy Summit Density Management

The actions from this sale were determined to be “may affect, likely to adversely affect” for endangered Umpqua River Coastal cutthroat trout and threatened Oregon Coastal coho salmon. In the Happy Summit EA water quality was identified as a key issue. The discussions in the fisheries report and in the EA address how the project design features will minimize adverse impacts to water quality.

Five specific project design features were identified in the EA to reduce the potential of adverse impacts to water quality.

1. Streambank stability would be maintained by reserving a no cut buffer of at least 20 feet on all

stream channels.

2. Some trees greater than 12 inches in diameter within the riparian area of Sleezer Creek would be directionally felled toward the stream and left to serve as interim large woody debris.
3. All new road construction would be temporary.
4. All roads on the haul route would be brought up to RMP standards.

A review of Exhibits A and C and the prospectus indicate:

1. The no cut buffer is marked on the ground and reserved from harvest.
2. Trees to be felled into Sleezer Creek are marked on the ground.
3. New construction on roads 20-6-36.0 and 21-6-14.1 would receive full decommissioning following completion of log hauling operations.
4. A total of 2.46 miles of road would be resurfaced (roads 20-6-25.1, 20-6-35.0, 20-6-36.0, and 21-6-1.3).
5. Three existing culverts would be replaced, four more would be installed.
6. A culvert on the fishbearing stream crossed by road 20-6-35.0 would be replaced to allow for fish passage. (As per discussion with Pete Howe and Lyle Andrews.)

Conclusion:

RMP requirements were met.

Findings:

Johnson Creek Commercial Thinning

The actions from this sale were determined to be “may affect, likely to adversely affect” for endangered Umpqua River Coastal cutthroat trout and threatened Oregon Coastal coho salmon. In the Johnson Creek EA water quality and reducing road density were identified as key issues. The discussions in the fisheries report and in the EA address how the project design features will minimize adverse impacts to water quality.

Four specific project design features were identified in the EA to reduce the potential of adverse impacts.

1. Streambank stability and water temperature would be protected by reserving a buffer of at least 20 feet on all stream channels.
2. 1.6 miles of road would receive some degree of decommissioning.
3. Approximately 10.9 miles of road on the haul route would be brought up to RMP standards.
4. All new road construction (1.1 miles) would be temporary.
5. Riparian vegetation of a small wetland in unit 15B would be protected by not permitting logging through the wetland.

A review of Exhibits A and C, and the prospectus indicate:

1. The no cut buffer is marked on the ground and reserved from harvest.
2. Thirteen roads (total 11.91 miles) would be graded and have the ditches pulled.
3. Re-surfacing would occur on 7.26 miles of road.
4. Fifty-five culverts will be replaced with new ones, eleven new culverts will be installed.
5. Ten spur roads will be built and decommissioned in the same year (total 1.11 miles).
6. A buffer was placed on the wet area in unit 15B.
7. Road 21-7-1.3 will be fully decommissioned (0.31 miles).

Conclusion:

RMP requirements were met.

Special Status and SEIS Special Attention Species Habitat

Expected Future Conditions and Outputs

Protection, management, and conservation of federal listed and proposed species and their habitats, to achieve their recovery in compliance with the Endangered Species Act and Bureau special status species policies.

Conservation of federal candidate and Bureau sensitive species and their habitats so as not to contribute to the need to list and recover the species.

Conservation of state listed species and their habitats to assist the state in achieving management objectives.

Maintenance or restoration of community structure, species composition, and ecological processes of special status plant and animal habitat.

Protection of Bureau assessment species and SEIS special attention species so as not to elevate their status to any higher level of concern.

Implementation Monitoring

Monitoring Question 1:

Are special status species being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb special status species, are steps taken to mitigate or avoid disturbances?

Monitoring Requirement:

At least 20 percent of the files on each year's timber sales and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding special status species and related recommendations and decisions in light of Endangered Species Act requirements, policy and SEIS Record of Decision Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed:

Class of 98 timber sale. Followup monitoring is pending on Dream Weaver timber sale (sold-unawarded) and Smoke Signal timber sale (awarded, inactive). No activities have occurred on these sales.

Findings:

Class of 98 timber sale

Animals:

During interdisciplinary review the project area was evaluated for habitat or habitat components that may support threatened, endangered, proposed for listing, Bureau Sensitive species, and RMP buffer

species.

Spotted owl (*Strix occidentalis caurina*) locations in the vicinity of the sale were evaluated to determine if project areas were likely to be occupied by spotted owls. Units considered to have a high potential for spotted occupancy were surveyed through 1998. During the environmental assessment a spotted owl from a nearby site was located in unit B. During the rest of 1997 and during 1998, follow-up surveys were done to determine if this was a new spotted owl territory. The survey data at this time indicates that this unit is not a territory. This owl was never found again after 1997 in unit B or its vicinity.

The entire project area is located outside of the marbled murrelet II zone and evaluated to not impact the murrelet.

Four units were evaluated as potential northern goshawk (*Accipiter gentilis*) habitat. These forest stands were surveyed during 1997 in an attempt to locate any occupied nests or territories. None were located.

All units were evaluated for potential Great Grey Owl habitat. The entire project area was considered not potential suitable habitat. All units are 1,500- 2,100 feet below the Great Gray Owl threshold elevation for implementing clearance surveys.

Based on the 1996-1997 25-mile buffer around known Del Norte salamander sites, units A and B are inside this buffer and were evaluated for Del Norte salamander habitat. These units did not have any suitable talus habitat and surveys were not done.

Selected units in this project were evaluated for component habitat pieces important to several Bureau Sensitive bat species. Tree marking to retain potential bat habitat in the stand and reduction of road construction reduced the loss of this component. Analysis of the sale as a whole for large diameter trees and the structure they provide for wildlife shows the following information. Of the retention trees marked, a total of 148 were greater than 40" DBH. This equates to .7 TPA. The original stands had 1.8 TPA over 40" DBH. The proportion of 40+" trees/total trees over 20" in the retention stands was 7.4%. The proportion of 40+" trees/total trees over 20" in the original stands was 4.5%.

See question one under all land use allocation for comments on the red tree vole and the papillose tailed dropper.

Plants:

One special status plant species (*Aster vialis*) was identified in the project area. "No disturbance areas" were tagged out of the timber sale to protect the population and habitat.

Conclusions:

Special status species are being addressed in deciding whether or not to go forward with forest management and other actions and steps are being taken to adequately mitigate disturbances.

Comment/Discussion:

None.

Monitoring Performed:

Happy Summit Density Management

Findings:**Special Status Animals**

The EA addresses several T&E and special status species: northern spotted owl, marbled murrelet, NSO critical habitat, murrelet critical habitat, red tree vole, blue-grey tail-dropper, torrent salamander, and red-tailed frog. Eighteen special status species (including SEIS species) were addressed in the wildlife biologist's input to the EA. Surveys were conducted in the area of spotted owls, murrelets, and molluscs; surveys for red tree voles were not required because habitat thresholds were met. Spotted owls and murrelets were not located in the immediate area of the sale. A blue-grey tail-dropper was located adjacent to one sale unit.

A finding of "...not likely to jeopardize the continued existence of the bald eagle, white-tailed deer, spotted owl or murrelet or adversely modify designated critical habitat for spotted owl or murrelets..." was received from the US Fish and Wildlife Service in a Biological Opinion dated 13 February 1998.

The EA, on page 12, mentions Terms and Conditions in the BO requiring seasonal restrictions to mitigate impacts to the spotted owl and murrelet. Since spotted owls and murrelets were not located in the sale area seasonal restrictions are not necessary at this time. Measures to protect the blue-gray tail-dropper were stated--retain existing hardwoods and CWD in the EA.

Special provisions in the contract for this sale provide the government with authority to halt activities should new information arise pertaining to T&E species, special status species (6840 definition), raptor or owl nests, and SEIS species; or to modify activities to protect occupied marbled murrelet sites. There are no specifics in the contract language regarding seasonal restrictions to protect owls or murrelets, although existing stipulations (Sec. 41(C)) would allow us to implement them if necessary. To protect blue-grey tail-droppers all hardwoods and large woody debris were retained for the government (Sec. 40(D)).

Special Status Plants

No special status vascular plants or bryophytes were found during surveys. Six Survey and Manage fungi and one lichen were observed. *Helvella compressa*, a Component 1 & 3 fungus was found. *H.compressa* is a candidate to be removed from the Survey and Manage species list because it has been found in disturbed nonforest and forest habitat (Castellano & O'Dell, Sept 1997). Five other Survey and Manage fungi and a lichen were found (Component 3 or Component 3&4). No mitigation is required for these species.

Special Status Fish

See previous discussion under monitoring question 2, potential adverse impacts to fish habitat and fish stocks.

Conclusion: RMP requirements were met.

Monitoring Question 2:

Do management actions comply with plans to recover threatened and endangered species?

Monitoring Requirement:

Review currently approved recovery plans for Bald Eagle, Peregrine Falcon, Marbled Murrelet and Columbian White-tailed Deer and draft recovery plan for the Northern Spotted-owl.

Monitoring Performed:

Programs were assessed for compliance with recovery plans.

Findings:

Proposed actions that have the potential to affect the species listed above were assessed through an interdisciplinary or multidisciplinary process (depending on type, scope and sensitivity of the project) which considered consistency and compliance with recovery plans.

Conclusions:

RMP requirements were met.

Comment/Discussion:

None

Monitoring Question 3:

What coordination with other agencies has occurred in the management of special status species?

Monitoring Requirement:

The Annual Program Summary will address Implementation Question 3.

Monitoring Performed:

Class of 98

Findings:

USFWS, NMFS consultation for listed species; REO coordination of SEIS special attention species; the BLM and USFS have a cooperative agreement to monitor out-migrating juvenile fish in the Little River watershed; the BLM, USFWS, and ODFW are also working together in various drainages to monitor out-migrating juvenile fish.

Findings:***Class of 98***

Where the consequences of an action may impact upon a special status species, (i.e., species listed as threatened or endangered, or proposed for listing) the Endangered Species Act (1973) requires consultation with the appropriate agency.

Because the Class of 98 timber sale is located within the range of the northern spotted owl, and constitutes a "May Affect" action, consultation with the United States Fish and Wildlife Service (USFWS) was required. This consultation was completed, and in a Biological Opinion dated February 13, 1998, the USFWS granted the BLM an incidental take permit, for the northern spotted owl, based on the removal of suitable habitat.

The Class of 98 timber sale is located within the Umpqua River Basin. Subsequent to the listing of the Umpqua River cutthroat trout as an endangered species, the BLM was required to consult with the

National Marine Fisheries Service (NMFS), the agency having jurisdiction in the matter of anadromous fish. Initial consultation for the action was completed, and a Biological Opinion, dated September 26, 1997, was received from NMFS granting an incidental take permit. Following a ruling by United States District Judge Barbara Rothstein on April 28, 1998 that two Biological Opinions issued by NMFS were insufficient, the BLM undertook an in-depth analysis of the consistency of the planned Class of 98 timber sale with the Aquatic Conservation Strategy.

The BLM reinitiated formal consultation with NMFS. Following the listing of the Oregon Coast coho salmon as threatened, the BLM requested that the Biological Opinion previously issued for Umpqua River cutthroat also be applied to the newly listed Oregon Coast coho salmon. The new Biological Opinion and incidental take permits are pending.

Conclusions:

Appropriate coordination with other agencies has occurred in the management of special status species.

Comment/Discussion:

None.

Cultural Resources Including American Indian Values

Expected Future Conditions and Outputs

Identification of cultural resource localities for public, scientific, and cultural heritage purposes.

Conservation and protection of cultural resource values for future generations.

Provision of information on long-term environmental change and past interactions between humans and the environment.

Fulfillment of responsibilities to appropriate American Indian groups regarding heritage and religious concerns.

Implementation Monitoring

Monitoring Question 1:

Are cultural resources being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb cultural resources, are steps taken to adequately mitigate disturbances?

Monitoring Requirements

At least 20 percent of the files on each year's timber sales and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding cultural resources and American Indian values and decisions in light of requirements, policy and SEIS Record of Decision Standards and Guidelines and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed

Class of 98 timber sale. Followup monitoring on Curtin Creek timber sale.

Findings

Class of 98 Timber Sale

A cultural clearance worksheet documents that field exams, site file reviews and inventory record reviews were conducted by the area Cultural Resource Specialist who concluded that "no known cultural resources will be impacted by this action". The project was consulted by the State Historical Preservation Office (SHPO) who agreed with the "no effect" determination.

Followup monitoring:

Curtin Creek Timber Sale

A cabin site and prehistoric evidence were identified in the project area. Both sites, located within Riparian Reserves, were protected from the timber sale activities by the Riparian Reserve buffer. Yarding has been completed and the unit has been hand piled for site preparation. Wet season burning of these hand piles will not impact the sites. No further monitoring is required.

Conclusion:

Cultural resources were addressed in deciding whether or not to go forward with Class of 98 timber sale. Mitigation was adequate on the Curtin Creek timber sale to prevent disturbance to cultural sites. RMP requirements were met.

Comment/Discussion:

None

Monitoring Performed:

Happy Summit Density Management

Findings:

This sale was checked but found to have no cultural sites and thus did not involve any mitigation.

Conclusion:

RMP requirements were met.

Visual Resources

Expected Future Conditions and Outputs

Preservation or retention of the existing character of landscapes on BLM-administered lands allocated for Visual Resource Management Class I and II management; partial retention of the existing character on lands allocated for Visual Resource Management Class III management and major modification of the existing character of some lands allocated for Visual Resource Management Class IV management.

Continuation of emphasis on management of scenic resources in selected high-use areas to retain or preserve scenic quality.

Implementation Monitoring

Monitoring Question 1:

Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in Class II and III areas?

Monitoring Requirements

Twenty percent of the files for timber sales and other substantial projects in Visual Resource Management Class II or III areas will be reviewed to ascertain whether relevant design features or mitigating measures were included.

Monitoring Performed

All Fiscal Year 1998 timber sale files.

Findings (South Resource Area):

No timber sales or substantial actions occurred in VRM class II or III lands in 1998. No followup was required from the 1997 monitoring as no actions occurred in VRM class II or III lands.

Conclusion:

RMP requirements were met.

Comment/Discussion:

None

Findings (Swiftwater Resource Area):

The Visual Resource Management System was utilized by each Resource Area of the District, with input from each respective Outdoor Recreation Planner or other specialist as a member of the ID team.

Seven environmental assessments were completed in FY-98 in the Swiftwater Resource Area. All had VRM analysis. Actions included 5 timber harvest or thinning projects, a recreation site construction project, and road decommissioning.

Six environmental assessments were completed in the South River Resource area. Five were Timber

related actions and one was a recreation site development. Two of the Timber harvest proposals were analyzed for VRM. One action received VRM mitigating action and the other was timber action dropped from further consideration due to VRM and other social and resource value issues.

Part of Christopher Folley unit 2 (unit 23B during the planning stage) lies within VRM II classification. This was identified by the Area Recreation Specialist during the planning process. It was determined not to be an issue because:

- A) Leaving 12-18 trees per acre (connectivity standards) was consistent with VRM II standards.
- B) The unit is in an unseen area, under the ROD regeneration harvests are allowed in unseen areas.

Part of Happy Summit unit 4 (unit 12A during the planning stage) lies within VRM III classification. This was identified by the Area Recreation Specialist during the planning process. It was determined not to be an issue because commercial thinnings are consistent with VRM III standards.

No other units from Christopher Folley, Happy Summit, Johnson Creek, or Bell Mountain lie within VRM II or III designation.

Conclusion:

RMP requirements were met.

Rural Interface Areas

Implementation Monitoring

Monitoring Question 1:

Are design features and mitigation measures developed and implemented to avoid/minimize impacts to health, life and property and quality of life and to minimize the possibility of conflicts between private and federal land management?

Monitoring Requirements

At least 20 percent of all actions within the identified rural interface areas will be examined to determine if special project design features and mitigation measures were included and implemented as planned.

Monitoring Performed:

All Fiscal Year 1998 projects.

Findings:

No actions occurred within rural interface areas as identified in the RMP as lands zoned R-5.
There is no pending followup monitoring.

Conclusions:

RMP objectives were met.

Comment/Discussion:

None

Recreation

Expected Future Conditions and Outputs

Provisions of a wide range of developed and dispersed recreation opportunities that contribute to meeting projected recreation demand within the planning area.

Provisions of nonmotorized recreational opportunities and creation of additional opportunities consistent with other management objectives.

Implementation Monitoring

Monitoring Question 1:

What is the status of the development and implementation of recreation plans?

Monitoring Requirements

The Annual Program Summary will address implementation question 1.

Monitoring Performed:

Program review of all established recreation sites.

Findings:

Cow Creek Recreation Area Management Plan is under development. One kiosk sites is nearing construction. Mineral withdrawals at recreation sites in the corridor are published in the FR and are scheduled to be completed within one year. Planning and site design for Island and watchable wildlife Day-Use Sites continue through the interdisciplinary team process.

In the North Umpqua and Umpqua SRMAs, facility upgrades and renovations continue to be implemented through Recreation Pipeline Restroation Funds under the existing North Umqpua Recreation Area Management Plan and Roseburg District RMP.

Conclusion:

RMP requirements were met.

Comment/Discussion:

None.

Special Areas

Expected Future Conditions and Outputs

Maintenance, protection, and/or restoration of the relevant and important values of the special areas which include: Areas of Critical Environmental Concern, Outstanding Natural Areas, Research Natural Areas, and Environmental Education Areas.

Provision of recreation uses and environmental education in Outstanding Natural Areas. Management of uses to prevent damage to those values that make the area outstanding.

Preservation, protection, or restoration of native species composition and ecological processes of biological communities in Research Natural Areas.

Provision and maintenance of environmental education opportunities to Environmental Education Areas. Management of uses to minimize disturbances of educational values.

Retention of existing Research Natural Areas and existing areas of Critical Environmental Concern that meet the test for continued designation. Retention of other special areas. Provision of new special areas where needed to maintain or protect important values.

Implementation Monitoring

Monitoring Question 1:

Are BLM actions and BLM authorized actions/uses near or within special areas consistent with RMP objectives and management direction for special areas?

Monitoring Requirements

Review program and actions for consistency with RMP objectives and direction.

Findings:

The Roseburg District has 12 special areas that total 11,323 acres. No major action or uses, all actions and uses consistent with objectives and management direction. Defensibility monitoring has been conducted annually on all ACEC/RNAs. Habitat has been restored from unauthorized use on one ACEC/RNA and noxious weeds have been controlled on two other ACEC/RNAs. A checklist for vascular plants is currently in preparation for publication for the Myrtle Island ACEC/RNA. Baseline fungi, lichen, and bryophyte inventories have been completed at six ACEC/RNAs, one ACEC, and one candidate ACEC. Baseline fungus inventories are currently being conducted.

Monitoring Question 2:

What is the status of the preparation, revision, and implementation of Areas of Critical Environmental Concern management plans?

Findings:

Draft management plans have been completed for two ACEC/RNAs and two more management plans are in preparation.

Seven ACECs were nominated by the public in the Final RMP. Four of these nominations are currently being reviewed by the South River Resource Area. All nominated areas are being managed to protect the proposed relevant and important values. Land acquisition proposed in the Final RMP to expand the Beatty Creek ACEC/RNA has not been pursued.

Wild and Scenic Rivers

Expected Future Conditions and Outputs

Protection of the Outstandingly Remarkable Values of designated components of the National Wild and Scenic Rivers System through the maintenance and enhancement of the natural integrity of river-related values.

Protection of the Outstandingly Remarkable Values of eligible/suitable wild and Scenic Rivers and the maintenance or enhancement of the highest tentative classification pending resolution of suitability and/or designation.

Protection of the natural integrity of river-related values for the maintenance or enhancement of the highest tentative classification determination for rivers found eligible or studied for suitability.

Designation of important and manageable river segments suitable for designation where such designation contributes to the National Wild and Scenic Rivers System.

Implementation Monitoring

Monitoring Question 1:

Are BLM actions and BLM authorized actions consistent with protection of the Outstandingly Remarkable Values of designated, suitable, and eligible, but not studied, rivers?

Monitoring Requirements

Annually, the files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the Outstandingly Remarkable Values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.

Monitoring Performed:

High-level monitoring of recreation use in the North Umpqua River was conducted daily between May 20 and Sept 25., 1998 through a Cooperative Management Agreement between the Roseburg District BLM and the Umpqua National Forest, North Umpqua Ranger District. BLM had the lead on monitoring in the entire river corridor; USFS had the lead on issuing Special Recreation Permits (14) to commercial river permittees. Employees engaged in monitoring included one full time BLM River Manager and one temporary USFS person. BLM covered the salary of the USFS temp. Objectives of the 1998 river survey were to:

- a. Identify types of recreation use occurring on the river.
- b. Provide a BLM/USFS presence on the river to contact, inform, and educate public users.
- c. Document visitor use including commercial and public use.
- d. Coordinate management of the river between the BLM and Umpqua National Forest.
- e. Identify, minimize and manage safety hazards and user conflicts on the North Umpqua River.

Findings:

1998 Use:

- 9 Boating Use: 680 visits (BLM only)
- 9 Fishing Use: 2,600 visits (BLM only)
- 9 For entire W&S River: Commercial Adjusted Use - 2,270 visits;
Private adjusted use - 4,343 visits.
- 9 Conflict between users: No major incidents were reported on the BLM segment of the Wild & Scenic River in FY-98. Groups contacted include: Boaters, campers along the river, anglers, fly-fishermen.

Interim management for Roseburg District Eligible Recreational Rivers is to exclude timber harvest in the riparian reserves, moderately restrict development of leasable and salable minerals, and protect a segment's free flowing values and identified ORVs. In undesignated segments, BLM has provided interim protective management for ORVs identified on BLM-lands along river segments determined eligible but not studied for inclusion as components of the National Wild & Scenic Rivers System.

Conclusion:

RMP requirements were met.

Socioeconomic Conditions

Expected Future Conditions and Outputs

Contribution to local, state, national, and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies.

Provision of amenities for the enhancement of communities as places to live and work.

Implementation Monitoring

Monitoring Question 1:

What strategies and programs have been developed, through coordination with state and local governments, to support local economies and enhance local communities?

Monitoring Requirements

Program Review

Findings:

The Jobs-in-the-Woods program is a principle strategy along with forest development and other contracting.

Conclusion:

RMP requirements were met.

Monitoring Question 2:

Are RMP implementation strategies being identified that support local economies?

Monitoring Requirements

Program Review

Findings:

Contracting of implementation projects related to RMP programs, and facilities have supported local economies.

Conclusion:

RMP requirements were met.

Monitoring Question 3:

What is the status of planning and developing amenities that enhance local communities, such as recreation and wildlife viewing facilities?

Monitoring Requirements

Program Review

Findings:

North Bank Habitat Management Area ACEC is currently undergoing planning for local recreational and wildlife viewing opportunities consistent with other ACEC objectives. Further detail of recreational or other amenities that would enhance local communities are described in the Annual Program Summary.

Conclusion:

RMP requirements were met.

Timber Resources

Expected Future Conditions and Outputs

Provision of a sustained yield of timber and other forest products.

Reduction of the risk of stand loss due to fires, animals, insects, and diseases.

Provision of salvage harvest for timber killed or damaged by events such as wildfire, windstorms, insects, or disease, in a manner consistent with management objectives for other resources.

Implementation Monitoring

Monitoring Question 1:

By land-use allocation, how do timber sale volumes, harvested acres, and the age and type of regeneration harvest stands compare to the projections in the RMP?

Monitoring Requirements:

Program and data base review. The Annual Program Summary will report volumes sold. The report will also summarize annual and cumulative timber sale volumes, acres to be harvested, and stand ages and types of regeneration harvest for General Forest Management Areas, Connectivity/Diversity Blocks and Adaptive Management Areas, stratified to identify them individually.

Monitoring Performed:

Program and data base were reviewed and summary prepared.

Findings:

Table 12. Roseburg District Timber Sale Volume and Acres.

MBF	FY 96	FY 97	FY 98	Total	1996-1998 Average	RMP/EIS Assumed Annual Average	Percent of Assumed Average
					1996-1998 Annual Average		
Total Timber Sale Vol.	45,993	51,783	44,545	142,321	47,440	49,500	90%
Matrix Timber Sale Vol.	42,250	47,611	37,817	127,678	42,559	45,000	94%
GFMA Regen. Timber Sale Vol.	33,061	27,708	24,742	85,511	2,850		
GFMA Comm. Thin TS Vol.	3,016	2,907	3,451	9,419	3,139		
GFMA Salvage TS Vol.	929	3,384	1,309	5,622	1,874		
C/D Block Regen. TS Vol.	865	5,123	5,890	11,878	3,959		
CID Block Comm Thin TS Vol.	2,978	3,455	1,739	8,172	2,724		
CID Block Salvage TS Vol.	206	117	576	899	300		
RR Density Mgt. TS Vol.	2,424	2,175	811	5,410	1,803		
RR Salvage TS Vol.	55	3	236	294	98		
LSR Density Mgt. TS Vol.	102	1,728	5,559	7,389	2,463		
LSR Salvage TS Vol.	1,162	266	123	1,551	517		
Total All Reserves	3,743	4,172	6,729	14,644	4,881	4,500	108%
Key Watershed TS Vol.	8,988	19,981	19,074	48,043	16,014	8,300	193%
Little River AMA TS Vol.	1,033	4,682	30	5,745	1,915	4,600	45%
Little River AMA Salvage Vol.	162	236	81	479	160		
Little River AMA Total Vol.	1,195	4,918	111	6,224	2,075		
<u>Acres</u>							
Total Regeneration Harvest	939	917	802	2,658	886	1,190	74%
Total Commercial thinning	520	702	536	1,063	354	84	698%
Total Density Management	216	301	483	1,000	333	66	505%
GFMA Regeneration Harvest	889	726	649	2,264	754		
GFMA Commercial thinning	197	267	361	825	275		
GFMA Salvage	24	276	119	419	140		
C/D Block Regen. Harvest	50	123	153	326	109		
C/D Block Comm. Thinning	229	301	175	705	235		
CID Block Salvage	25	25	50	100	33		
RR Density Management	216	188	97	501	167		
RR Salvage	4	0	20	24	8		
LSR Density Management	0	113	386	499	166		
LSR Salvage	96	33	8	137	46		
Total All Reserves	316	334	511	1,161	387		
Little River AMA Regeneration Harvest	0	68	0	68	23		
Little River AMA Thinning	94	134	0	228	76		
Little River AMA Salvage	9	36	7	52	17		

Matrix Regen totals = Regen +CC

Matrix CT totals = CT + DM + Select Cut + Understory Reduction

RR DM total = DM + CT + Select Cut

LSR DM total = DM + CT + Select Cut

LSR Salvage total = Salvage + ROW

AMA Thin total = CT + DM + Select Cut

AMA Salvage total = Salvage + ROW

Conclusion:

RMP requirements were met.

Monitoring Question 2:

Were the silvicultural (e.g., planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity, implemented?

Monitoring Requirement:

Program and data base review. An annual district wide report will be prepared to determine if the silvicultural and forest health practices identified and used in the calculation of the Allowable Sale Quantity were implemented. This report will be summarized in the Annual Program Summary.

Monitoring Performed:

Program and data base were reviewed and summary prepared.

Findings:

Table 13. Roseburg District Forest Development Activities.

Monitoring Item	FY 96	FY 97	FY 98	Totals to date	Average Annual	Projected Annual	Differences Actual-Projected
Brushfield Conversion	0	0	0	0	0	15	0
Site Preparation (fire)	252	846	149	1,247	416	840	50%
Site Preparation (other)	0	0	0	0	0	50	0
Planting (regular stock)	737	725	1,183	2,645	882	290	304%
Planting (improved stock)	269	372	157	798	266	1,140	20%
Maintenance/Protection	2,224	1,525	1,350	5,099	1,700	830	205%
PCT	3,629	3,903	4,305	11,837	3,946	3,900	101%
Pruning	331	858	957	2,146	715	460	155%
Fertilization	0	4,278	1,060	5,338	1,779	1,140	156%
Reforestation Surveys	14,563	10,736	10,830	36,129	12,043	0	0

Data is for contracts awarded after October 1, 1995. Data is displayed by fiscal year of contract award and does not necessarily correspond with the year the project was actually accomplished.

Conclusion:

RMP requirements were met.

Special Forest Products

Expected Future Conditions and Outputs

Production and sale of special forest products when demand is present and where actions taken are consistent with primary objectives for the land use allocation.

Utilization of the principles of ecosystem management to guide the management and harvest of special forest products.

Implementation Monitoring

Monitoring Question:

Is the sustainability and protection of special forest product resources ensured prior to selling special forest products?

Monitoring Requirements:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

Use of special provisions on permits that restrict the amount of plant material or plant area to be harvested. Heavily harvested areas rotated or rested as appropriate for at least two years. None sold if special status species cannot be clearly identified to permittee.

Conclusion:

RMP requirements were met.

Monitoring Question:

What is the status of the development and implementation of specific guidelines for the management of individual special forest products?

Monitoring Requirements:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

Final Handbook on Guidance for Special Forest Products was published at the end of fiscal year 1996.

Conclusion: RMP requirements were met.

Noxious Weeds

Expected Future Conditions and Outputs

Containment and/or reduction of noxious weed infestations on BLM-administered land using an integrated pest management approach.

Avoidance of the introduction or spread of noxious weed infestations in all areas.

Implementation Monitoring

Monitoring Question 1.

Are noxious weed control methods compatible with Aquatic Conservation Strategy Objectives?

Monitoring Requirements:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

One overall project for the district that is compatible with Aquatic Conservation Strategy Objectives and Integrated Pest Management, Northwest Noxious Weed EIS.

Conclusions:

RMP requirements were met.

Fire/Fuels Management

Expected Future Conditions and Outputs

Provision of the appropriate suppression responses to wildfires in order to meet resource management objectives and minimize the risk of large-scale, high intensity wildfires.

Utilization of prescribed fire to meet resource management objectives. (This will include, but not be limited to, fuels management for wildfire hazard reduction, restoration or desired vegetation conditions, management of habitat, and silvicultural treatments.)

Adherence to smoke management/air quality standards of the Clean Air Act and State Implementation Plan standards for prescribed burning.

Implementation Monitoring

Monitoring Question 1:

What is the status of the preparation and implementation of fire management plans.?

Monitoring Requirement:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

Late-successional reserve assessments and Little River Adaptive Management Area Plan are either complete or in draft form. These assessments and plan will address fire and fuels.

Conclusions:

RMP requirements were met.

Monitoring Question 2:

Are Wildfire Situation Analyses being prepared for wildfires that escape initial attack?

Monitoring Requirement:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

Wildfire Situation Analyses are prepared for escaped fire situations from slash burns. Douglas Forest Protection Agency (DFPA) is contracted for wildfire suppression and prepares similar analyses.

Conclusions:

RMP requirements were met.

Monitoring Question 3:

Do wildfire suppression plans emphasize maintaining late-successional forest habitat?

Monitoring Requirement:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

Wildfire suppression plans include protecting multiple resources including late-successional habitat. The plans and assessments for Late-Successional Reserves and the Little River Adaptive Management Area address this issue.

Conclusions:

RMP requirements were met.

Monitoring Question 4:

What is the status of interdisciplinary team preparation and implementation of fuel hazard reduction plans?

Monitoring Requirement:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

Fuels and Fire Management Plans have begun. Some analyses is being done in conjunction with Late-Successional Reserve Assessments.

Conclusions:

RMP requirements were met.

GLOSSARY

AMA - Adaptive Management Area - The Salem District's Northern Coast AMA is managed to restore and maintain late-successional forest habitat while developing and testing new management approaches to achieve the desired economic and other social objectives.

Allowable Sale Quantity (ASQ) - an estimate of annual average timber sale volume likely to be achieved from lands allocated to planned, sustainable harvest. ASQ is used interchangeably with PSQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions. See Salem FEIS glossary for technical differences.

Anadromous Fish - Fish that are hatched and reared in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon, steelhead, and shad are examples.

Archaeological Site - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

Area of Critical Environmental Concern (ACEC) - An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources, or other natural systems or processes; or to protect life and provide safety from natural hazards.

Best Management Practices (BMP) - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Biological Diversity - The variety of life and its processes, including a complexity of species, communities, gene pools, and ecological function.

Candidate Species - Plant and animal taxa considered for possible addition to the List of Endangered and Threatened Species. These are taxa for which the Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

Cavity Nesters - Wildlife species, most frequently birds, that require cavities (holes) in trees for nesting and reproduction.

Commercial Thinning - The removal of merchantable trees from a stand to encourage growth of the remaining trees.

Connectivity - The Connectivity / Diversity blocks are specific lands spaced throughout the matrix lands, which have similar goals as matrix but have specific Standards & Guidelines which affect their timber production. They are managed on longer rotations (150 years), retain more green trees following regeneration harvest (12-18) and must maintain 25-30 percent of the block in late successional forest.

Cubic Foot - A unit of solid wood, one foot square and one foot thick.

Cumulative Effect - The impact that results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Density Management - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, to open the forest canopy, or to accelerate the attainment of old growth characteristics, if maintenance or restoration of biological diversity is the objective.

District Designated Reserves (DDR) - Areas designated for the protection of specific resources, flora and fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the PSQ.

Eligible River - A river or river segment found, through interdisciplinary team and, in some cases interagency review, to meet Wild and Scenic River Act criteria of being free flowing and possessing one or more Outstandingly Remarkable Values.

Endangered Species - Any species defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range and published in the Federal Register.

Environmental Assessment (EA) - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment; and whether a formal Environmental Impact Statement is required; and to aid an agency's compliance with NEPA when no EIS is necessary.

General Forest Management Area (GFMA) (See Matrix) - This is the federal land not encumbered by any other land use designation, on which most timber harvest and silvicultural activities will be conducted.

Harvested Volume or Harvested Acres - Refers to timber sales where trees are cut and taken to a mill during the fiscal year. Typically, this volume was sold over several years. This is more indicative of actual support of local economies during a given year.

Hazardous Materials - Anything that poses a substantive present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

Land Use Allocation (LUA) - Allocations which define allowable uses / activities, restricted uses / activities and prohibited uses / activities. Each allocation is associated with a specific management objective. Those discussed below include Matrix (or GFMA), Connectivity, LSR and AMA.

Late-Successional Forests - Forest seral stages that include mature and old growth age classes.

LSR - Late Successional Reserve - lands which are managed to protect and enhance old-growth forest conditions.

Matrix Lands - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

MMBF - abbreviation for million board feet of timber

Noxious Plant/Weed - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

O&C Lands - Public lands granted to the Oregon and California Railroad Company, and subsequently reverted to the United States, that are managed by the Bureau of Land Management under the authority of the O&C Lands Act.

Offered (sold) Volume or Offered (sold) Acres - Any timber sold during the year by auction or negotiated sales, including modifications to contracts. This is more of a “pulse” check on the district’s success in meeting PSQ goals than it is a socioeconomic indicator, since the volume can get to market over a period of several years. It should be noted that for this Annual Program Summary we are considering “offered” the same as “sold”. Occasionally sales do not sell. They may be reworked and sold later or dropped from the timber sale program. Those sold later will be picked up in the APS tracking process for the year sold. Those dropped will not be tracked in the APS.

Off-Highway Vehicle (OHV) - Any motorized track or wheeled vehicle designed for cross-country travel over natural terrain. The term, "Off Highway Vehicle" will be used in place of the term "Off Road Vehicle" to comply with the purposes of Executive Orders 11644 and 11989. The definition for both terms is the same.

Open: Designated areas and trails where Off Highway Vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.

Limited: Designated areas and trails where Off Highway Vehicles are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.

Closed: Areas and trails where the use of Off Highway Vehicles is permanently or temporarily prohibited. Emergency use is allowed.

Outstanding Natural Area (ONA) - An area that contains unusual natural characteristics and is managed primarily for educational and recreational purposes.

Outstandingly Remarkable Values (ORV) - Values among those listed in Section 1 (b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values . . ." Other similar values that may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research.

Precommercial Thinning - The practice of removing some of the trees less than merchantable size from a stand so that remaining trees will grow faster.

Prescribed Fire - A fire burning under specified conditions that will accomplish certain planned objectives.

Probable Sale Quantity (PSQ) - An estimated volume that can be harvested from matrix and AMA lands based on certain computer modeling assumptions.

“Projected Acres” are displayed by modeled age class for the decade. These “modeled” age class acres are estimates derived from modeling various silvicultural prescriptions for regeneration, commercial thinning and density management harvest. Modeled age class acre projections may or may not correspond to “Offered” or “Harvested” age class acres at this point in the decade. Additional age classes are scheduled for regeneration, commercial thinning and density management harvest at other points in the decade.

Regeneration Harvest - Timber harvest conducted with the partial objective of opening a forest stand to the point where favored tree species will be reestablished.

Regional Ecosystem Office (REO) - The main function of this office is to provide staff work and support to the Regional Interagency Executive Committee (RIEC) so the standards and guidelines in the forest management plan can be successfully implemented.

Regional Interagency Executive Committee (RIEC) - This group serves as the senior regional entity to assure the prompt, coordinated, and successful implementation of the forest management plan standards and guidelines at the regional level.

Research Natural Area (RNA) - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes.

Resource Management Plan (RMP) - A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act.

Right-of-Way - A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.

Rural Interface Areas - Areas where BLM administered lands are adjacent to or intermingled with privately owned lands zoned for 1 to 20-acre lots or that already have residential development.

Seral Stages - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages:

Early Seral Stage - The period from disturbance to crown closure of conifer stands usually occurring from 0-15 years. Grass, herbs, or brush are plentiful.

Mid Seral Stage - The period in the life of a forest stand from crown closure to ages 15-40. Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover may be present.

Late Seral Stage - The period in the life of a forest stand from first merchantability to culmination of Mean Annual Increment. This is under a regime including commercial thinning, or to 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding and thermal cover may be present. Forage is minimal.

Mature Seral Stage - The period in the life of a forest stand from Culmination of Mean Annual Increment to an old growth stage or to 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.

Old Growth - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old growth stages.

Silvicultural Prescription -A detailed plan, usually written by a forest silviculturist, for controlling the establishment, composition, constitution, and growth of forest stands.

Site Preparation - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burns, herbicides or a combination of methods.

SEIS Special Attention Species - a term which incorporates the “Survey and Manage” and “Protection Buffer” species from the Northwest Forest Plan. (RMP30)

Special Status Species - Plant or animal species in any of the following categories

- * Threatened or Endangered Species
- * Proposed Threatened or Endangered Species
- * Candidate Species
- * State-listed Species
- * Bureau Sensitive Species
- * Bureau Assessment Species

Visual Resource Management (VRM) - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

Wild and Scenic River System - A National system of rivers or river segments that have been designated by Congress and the President as part of the National Wild and Scenic Rivers System (Public Law 90-542, 1968). Each designated river is classified as one of the following:

Wild River -A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Designated wild as part of the Wild and Scenic Rivers System.

Scenic River -A river or section of a river free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads. Designated scenic as part of the National Wild and Scenic Rivers System.

Recreational River - A river or section of a river readily accessible by road or railroad, that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past. Designated recreational as part of the National Wild and Scenic Rivers System.

Acronyms/Abbreviations

ACEC	- Area of Critical Environmental Concern
ACS	- Aquatic Conservation Strategy
APS	- Annual Program Summary
BA(s)	- Biological Assessments
BLM	- Bureau of Land Management
BMP(s)	- Best Management Practices
CBWR	- Coos Bay Wagon Road
CFER	- Cooperative Forest Ecosystem Research
COPE	- Coastal Oregon Productivity Enhancement project
CT	- Commercial Thinning
CX	- Categorical Exclusions
CWA	- Clean Water Act
CWD	- Coarse woody debris
DEQ	- Oregon Dept. Of Environmental Quality
DM	- Density Management
EA	- Environmental Analysis
EIS	- Environmental Impact Statement
EPA	- U.S. Environmental Protection Agency
ERFO	- Emergency Relief Federally Owned
ERMA	- Extensive Recreation Management Area
ESA	- Endangered Species Act
ESU	- Evolutionarily Significant Unit
FEIS	- Final Environmental Impact Statement
FLPMA	- Federal Land Policy and Management Act
FONSI	- Finding of No Significant Impacts
FS	- Forest Service (USFS)
FY	- Fiscal Year
GFMA	- General Forest Management Area
GIS	- Geographic Information System
GTR	- Green Tree Retention
IDT	- Interdisciplinary Teams
LSR	- Late-Successional Reserve
LUA	- Land Use Allocation
LWD	- Large Woody Debris
MMBF	- Million board feet
MOA	- Memorandum of Agreement
MOU	- Memorandum of Understanding
NEPA	- National Environmental Policy Act
NFP	- Northwest Forest Plan
NMFS	- National Marine Fisheries Service
O&C	- Oregon and California Revested Lands
ODF	- Oregon Department of Forestry
ODFW	- Oregon Department of Fish and Wildlife
OSU	- Oregon State University
PACs	- Province Advisory Councils

PD	- Public Domain
PGE	- Portland General Electric
PILT	- Payment in lieu of taxes
PL	- Public Law
PSQ	- Probable Sale Quantity
RA	- Resource Area
REO	- Regional Ecosystem Office
RIEC	- Regional Interagency Executive Committee
RMP	- Resource Management Plan
RMP/ROD	- The Roseburg District Resource Management Plan/ Record of Decision
RO	- FS Regional Office
ROD	- Record of Decision
RPA	- Reserve Pair Area
RR	- Riparian Reserve
R/W	- Right-of-Way
SEIS	- Supplemental Environmental Impact Statement
S&G	- Standard and Guideline
S&M	- Survey and Manage
SRMA	- Special Recreation Management Area
TMO	- Timber Management Objective(s)
TMP	- Transportation Management Plan
TPCC	- Timber Productivity Capability Classification
UO	- University of Oregon
USDA	- U.S. Department of Agriculture
USFS	- U.S. Forest Service
USFWS	- U.S. Fish and Wildlife Service
WC	- Watershed Council
WFSA	- Wildfire Situation Analysis
WQMP	- Water Quality Management Plan